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RECORD, CASE No. 13,863.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1892.

TERM NO., 251.

WILBUR F. BRIGHAM, TRUSTEE, APPELLANT,

vs.

JUDSON H. COFFIN AND L. DEWART APSLEY.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MASSACHUSETTS.

FILED OCTOBER 21, 1889.

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1 UNITED STATES OF AMERICA, *Massachusetts District,* } *ss:*

At a circuit court of the United States for the first circuit, begun and holden at Boston, within and for the district of Massachusetts, on Monday, the fifteenth day of October, in the year of our Lord one thousand eight hundred and eighty-eight, before the Honorable Le Baron B. Colt, circuit judge.

WILBUR F. BRIGHAM, Trustee, Complainant,
v.
JUDSON H. COFFIN *et al.*, Defendants. } No. 2383. Equity.

The bill of complaint in this cause was filed in the clerk's office on the fifteenth day of April, A. D. 1887, and was duly entered at the October term of this court, A. D. 1886, and is in the words and figures following:

2 *Bill of Complaint. Filed April* 15, 1887.

To the honorable the judges of the circuit court of the United States, sitting in equity, within and for the district of Massachusetts:

Wilbur F. Brigham, trustee, of Hudson, in the State of Massachusetts, a citizen of the State of Massachusetts, brings this his bill against Judson H. Coffin, of said Hudson, and L. Dewart Apsley, also of said Hudson, both citizens of the State of Massachusetts, and thereupon your orator complains and says:

1. That heretofore and before the fourteenth day of August, A. D. 1883, Frank E. Aldrich, of Boston, became and was the original and first inventor of an improvement in rubber cloth or fabric, and thereupon made application for letters patent therefor, and, after due proceedings had, letters patent in due form were duly issued to said Frank E. Aldrich, dated Aug. 14, 1883, and numbered 283,057, and that said letters patent are still outstanding, and that said letters patent are vested in your orator by assignment.

2. That said Frank E. Aldrich, the patentee, and your orator have put the said invention into practice, and the same is of great value, and no one without your orator's consent and license ought to practise the same.

2a 3. But that the said defendants, Judson H. Coffin and L. D. Apsley, who are associated in business, as your orator is informed and believes, as the Goodyear Gossamer Company or the Goodyear Gossamer Rubber Company, without the consent of your orator and without right have made, used, and sold great quantities of the rubber cloth or fabric patented by said letters patent and the exclusive property of your orator, as hereinbefore set forth, and threaten and intend to continue to make, use, and sell rubber cloth or fabric of the character patented by said letters patent without the consent or license of your orator.

4. Whereby they have infringed said letters patent and your

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2. That said Frank E. Aldrich, the patentee, and your orator have put the said invention into practice, and the same is of great value, and no one without your orator's consent and license ought to practise the same.

2a 3. But that the said defendants, Judson H. Coffin and L. D. Apsley, who are associated in business, as your orator is informed and believes, as the Goodyear Gossamer Company or the Goodyear Gossamer Rubber Company, without the consent of your orator and without right have made, used, and sold great quantities of the rubber cloth or fabric patented by said letters patent and the exclusive property of your orator, as hereinbefore set forth, and threaten and intend to continue to make, use, and sell rubber cloth or fabric of the character patented by said letters patent without the consent or license of your orator.

4. Whereby they have infringed said letters patent and your

orator's rights under the same and cause your orator to believe that they will continue to infringe the same, to the damage of your orator.

Wherefore your orator prays that the defendants may, if they can, answer this bill and show cause why they should not be enjoined from further infringement of said letters patent, and may account with and pay over to your orator the profits they have made by such infringement, and also all damages they have caused to your orator by the same.

And that further and other relief may be granted to your orator may it please your honors to grant—

First. A writ of injunction *pendente lite.*

Second. A writ of injunction during the term of the patent.

Third. A writ of subpœna.

Each in due and usual form and under usual penalties, and each to be directed to the said defendants, Judson H. Coffin and L. Dewart Apsley.

And your orator will ever pray, etc.

WILBUR F. BRIGHAM, *Trustee.*

THOS. WM. CLARKE,
Solicitor and of Counsel.

UNITED STATES OF AMERICA, }
District of Massachusetts. }

BOSTON, *April* 15, 1887.

Personally appeared Wilbur F. Brigham, who, being duly sworn, on oath deposes and says he has read the foregoing bill of complaint and subscribed the same and the same is true except the matters therein stated on information, and as to those he believes it to be true.

Before me— F. T. RAYMOND,
[SEAL.] *Notary Public.*

3 This cause, entered as aforesaid, was thence continued to the May term of this court, A. D. 1887, when the following answer and replication were filed:

Answer. (*Filed July* 1, 1887.)

The joint and several answer of L. Dewart Apsley and Judson H. Coffin, respondents, to the bill of complaint of Wilbur F. Brigham, trustee, complainant.

These defendants, reserving to themselves all manner of benefit and advantage of exception that can or may be had or taken to the many errors, insufficiencies, and imperfections in the said bill of complaint contained, for answer thereto or unto so much thereof as they are advised it is material or necessary for them to make answer unto, answering, say:

First. They are not informed, save by said bill, as to the assignment in said bill mentioned, and leave the complainant to make such proof thereof as he may be advised.

Second. They deny on information and belief that said Aldrich is the original and first inventor or discoverer of any material and substantial part of the thing patented in letters patent No. 283,057, dated Aug. 14, 1883, in the bill of complaint mentioned, and give notice that they will rely upon letters patent of the United States No. 226,031, dated March 30, 1880, granted on that date to Francis Brigham, Wilbur F. Brigham, S. Myron Hewitt, and William F. Prusha, and also upon letters patent No. 170,941, dated Dec. 14, 1875, and granted on that date to Hiram P. Dunbar and Thomas C. Lothrop, in support of this defence.

4 Third. They deny that the said patent, No. 383,057, in the bill of complaint mentioned describes anything of any value or importance in the art of making rubber fabrics and aver that all that is therein described is practically worthless, and they also deny that the alleged invention of said Aldrich, described in said letters patent in the bill of complaint mentioned, is any advance in the art of making rubber fabrics, and they also deny that rubber fabrics have ever been practically manufactured as described in said alleged letters patent. Therefore they say that said letters patent are wholly null and void.

Fourth. They deny that they have ever made, used, or sold any of the rubber cloth or fabric patented by letters patent No. 283,057 in the bill of complaint mentioned. They also deny that they have ever threatened to make, use, or sell any such rubber cloth or fabric; but they admit that they have made and sold and are now making and selling and intend to continue to make and sell rubber fabrics consisting of a woven cloth coated with a thin coat of rubber of one color and ornamented by stripes of rubber of a different color, and maintain that they have a right so to do, and deny that the rubber cloth or fabric so made by them is substantially the same as anything claimed in said letters patent No. 283,057, and also deny that any invention or discovery is described in said letters patent as used, practiced, or embodied in said fabrics made by these defendants or in any machine or method used by them in the manufacture of their said fabrics.

Wherefore they submit that the said complainant is not entitled to the relief prayed for in his said bill or any part thereof; without this, that any other matter contained in said bill material to be answered unto and not herein sufficiently answered unto, confessed and avoided, traversed or denied, is true.

All of which matters and things these respondents are ready to aver, maintain, and prove as this honorable court shall direct, and pray to be hence dismissed with their reasonable costs and charges in this behalf most wrongfully sustained.

JUDSON H. COFFIN.
L. DEWART APSLEY.

5 UNITED STATES OF AMERICA,
District of Massachusetts, County of Middlesex, } *ss:*

On this twenty-ninth day of June, A. D. 1887, before me personally appeared the above-named Judson H. Coffin and L. Dewart

Apsley and made oath that they have read the answer above made, subscribed by them, and know the contents thereof, and that the same is true of their own knowledge except as to matters which are therein stated to be on information and belief, and as to those matters they believe them to be true.

[SEAL.] DANIEL W. STRATTON,
Notary Public.

Replication. (*Filed July* 22, 1887.)

Complainant joins issue.

By solicitor, THOS. WM. CLARKE.

This cause was thence continued from term to term to this present October term, A. D. 1888, when, publication of the testimony having passed in the clerk's office, it is set down for hearing and fully heard by the court. On the fifteenth day of February, A. D. 1889, the opinion of the court is announced and the following decree is entered:

Final Decree.

FEBRUARY 15, 1889.

This cause comes on to be heard at this present term upon the pleadings and proofs and is argued by counsel for the respective parties, and now, to wit, February 15, A. D. 1889, it is ordered, adjudged, and decreed by the court that the bill of complaint in this cause be, and the same is hereby, dismissed with costs, taxed at ——.

By the court:

JOHN G. STETSON, *Clerk.*

From this decree the complainant, in open court, claims an appeal to the Supreme Court of the United States, and gives good and sufficient security that he will prosecute his appeal to effect and answer all damages and costs if he fail to make his plea good, and said appeal is allowed.

A true record.

Attest: JOHN G. STETSON, *Clerk.*

6 The following is the evidence used at the hearing of said cause before said circuit court:

Evidence for Complainant.

Taken pursuant to the sixty-seventh rule of the Supreme Court of the United States, in equity, as amended, before me, Stephen Thacher, special examiner.

BOSTON, *Nov.* 10, 1887.

Present: Thomas W. Clarke, Esq., of counsel for complainant; James E. Maynadier, Esq., of counsel for defendants.

Complainant's counsel offers in evidence U. S. letters patent No. 283,057, dated Aug. 14, 1883, granted to Frank E. Aldrich for improvement in rubber cloths or fabric.

It is agreed that the specification of this patent only may be part of the record, and that a Patent Office copy may be filed in lieu of the original, annexed to the patent.

Deposition of Stephen P. Sharples.

Direct examination by THOMAS W. CLARKE, Esq., of counsel for complainant:

Int. 1. What is your name, age, residence, and occupation; and what, if any, experience have you had in the examination and investigation of questions of inventions, particularly those having relation to chemistry?

Ans. Stephen P. Sharples; about forty-five years old; reside in Cambridge, Mass.; am doing business at No. 13 Broad street, Boston, as analytical and consulting chemist. I have had experience since 1872 in this line of business and have frequently been called as expert in cases involving patents.

Int. 2. Have you examined and do you understand the Aldrich letters patent No. 283,057 and the improvement in rubber cloths and fabrics therein described and referred to in the claims?

7 Ans. I have examined this patent, and think I understand the subject-matter of it and its claims.

(Defendants' counsel admits that the gossamer water-proof contained in the box marked "India stripe circular, manufactured by Goodyear Gossamer Company, style B, 52 ◁ IN ▷," and also marked with the title of this case on the inside of the cover, the hood of which water-proof has been detached and is marked inside "Mar. 24, 1887, S. P. S.," was made and sold by defendants.)

Int. 3. Have you examined the exhibit just produced, and, if so, please state when and what examination you made of it, and do you understand in what manner the rubber cloth of said exhibit was made and striped?

Ans. I examined this cloth before in March, 1887, and as the result of my examination I found that the article was made of cloth, to which had been applied a compound containing rubber; that this thickness of the cloth varied; that the slate-colored stripes were thinner than the purple, thus showing that the purple stripe had been applied over the slate-colored ground. This was further shown by carefully scraping the cloth, whereby the purple stripe was removed, and on testing the material removed by this scraping it was found to contain rubber.

Int. 4. In the affidavit of Mr. Videto in this case it says "that this fabric of which the exhibit is made was manufactured as follows: The cloth was coated with a rubber compound of a drab color by means of a knife in the familiar way which I have described. The knife and surplus drab compound was then removed from the machine and a new knife of a construction invented by me, and, so far as I know, wholly new with me, substituted for it. This knife was in the form of a trough, with a number of holes in it at the

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angle formed by its two sides, and was partly filled with the blue compound, so that when the fabric travelled under it in the ordinary way the blue compound flowed through the holes in the trough knife and made the blue stripes upon the drab ground." Assuming this to have been the method adopted for coating this cloth which you examined, will you please compare the method of manufacture just described with the method of manufacture described in the
Aldrich patent, stating their resemblances and differences
8 and whether or not the improvement in the art described in
the Aldrich patent was practised in the manufacture of the
cloth of which the exhibit consists, giving your reasons for any opinion you may express?

Ans. The second claim of the Aldrich patent is: "As an improved article of manufacture, a rubber cloth, or fabric composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures in an ink or printing compound of a different color or shade from the body of the cloth or fabric, said ink or compound being composed in part of rubber, caoutchouc, gutta-percha, or some analogous substance, and a coloring material or materials, substantially as specified."

The cloth of this exhibit consists of a cloth coated with rubber and ornamented with stripes of a different shade from the body of the cloth. In regard to the manner of coating it, the application of the ground color or coat was by the old and well-known device long used in coating rubber cloth. The purple stripe or blue stripe was applied by a device which is analogous to a device used by paper rulers in ruling paper—that is, a color was allowed to flow on cloth through a series of openings on the cloth which were analogous to the pen points used in ruling paper. A somewhat analogous device is the comb used by painters in imitating the grain of wood.

This method of ornamentation by ruling lines has, to my own knowledge, been in use a number of years, and was adopted, as it was much cheaper to rule and ornament paper this way than it was to engrave blocks for it. I should regard this method of ornamentation as fully covered in the specification by the words in the thirty-first line, "or in any other suitable manner."

(Answer objected to by counsel for defendants as being beyond the province of the witness.)

Int. 5. For how long, prior to the year 1883, had the method of ornamentation by ruling lines or by the use of the comb used by painters in imitating the grain of wood been in use to your knowledge?

Ans. The use of the comb is old. I have seen it used since 1850.
I first saw it some time in the early part of the fifties, when
9 it was used in my father's house. The ruling I first saw done
about 1880. At that time there was quite a demand for fancy
ruled paper for covering boxes, and Mr. West, who was a next-door neighbor of mine, ruled many reams of it.

Int. 6. Whether or not printing from reliefs in imitation or semblance of ruling with pen had also been practised as early as 1882.

Ans. Almost all works on book-keeping have their ruling printed from ordinary printers' rulers, which are merely pieces of metal which receive the ink on their edges and impart it in turn to the paper.

Int. 7. Whether or not, prior to the year 1883, you know or have been informed of any colored ink suitable for the ornamentation of rubber goods and containing India-rubber solution as a vehicle.

Ans. I have not known or heard of the use of such inks.

Int. 8. Whether or not the ordinary printers' ink of the paper printers or the inks or stains of the calico printers are suitable for use in the ornamentation of India-rubber fabrics; and if not, why not?

Ans. Neither of these varieties of inks are suitable for the purpose. The printers' ink contains linseed oil and turpentine, neither of which should be allowed to come in contact with surfaces of rubber cloth. Calico printers' ink or pigment would not adhere to the surface. It is an aqueous mixture and depends on its subsequent treatment for adherence to the cloth, the fibre of the cloth itself playing an important part in the process.

Cross-examination by James E. Maynadier, Esq., of counsel for defendants:

Cross-int. 9. It seems to me that there is a *petitio principii* in your seventh answer, so please reconsider that question and answer and state what you consider was meant by the word "ink" used in the question and what you meant by the term "inks" used in the answer.

Ans. I do not think the word "ink" is quite rightly used in either the question or answer, but I have used it in the sense it is used in
the patent, and the patent itself uses the words "or com-
10 pound" as equivalent to ink, and by my answer I merely
intended to say that I had not known of the use of such ink
or compound in ornamenting rubber goods. I had known prior to this time (1883) of the use of compounds containing rubber as an ingredient as a coating for cloth and had experimented with the same.

Cross-int. 10. Should not your answer to the seventh question have been, in substance, that colored compounds of the kind described in the question under the term ink or inks were well known to you and were matters of general and common knowledge long before 1883?

Ans. I did not understand the question as asking whether such inks were known and in existence, but as asking if I knew of their use for a certain purpose. I answered it accordingly.

Cross-int. 11. You admit, do you not, that the compounds referred to in the seventh question were known to you and were matters of general and common knowledge a good many years before 1883?

Ans. I have already so stated in my answer to Int. 10.

Cross-int. 12. It seems to me, then, that your seventh answer certainly needs explanation and I think excuse. Do you agree with me on either of these points?

Ans. I do not see in what way that needs further explanation in addition to what I have already given in answer to your questions. I had supposed that one of the objects of cross-examination was for counsel to obtain such explanation of terms used as would enable him to understand the sense in which they were used. If I have not fully explained the sense in which I understood and used the word ink I am willing to give any further explanation that you may wish.

Cross-int. 13. I will put the seventh question with a slight change: Whether or not, prior to the year 1883, you know or have been informed of any compound suitable for the ornamentation of rubber goods and containing an India-rubber solution as a vehicle.

Ans. If you will read my answer to the seventh question you will see that I have merely referred to the use of such inks for the purpose mentioned. Compounds that could be used for such purpose were undoubtedly in existence.

11 Cross-int. 14. And will you not go further and say that they were generally and widely known among those skilled in the manufacture of rubber long before 1883?

Ans. Various colored compounds were known and used for coating rubber cloths; two varieties of such were in very common use—the white and the black. The other colors were not in such common use, but, if I recollect right, there were directions for preparing such compounds in some books.

Cross-int. 15. Your seventh answer asserts tacitly, as I understand it, a marked difference of some sort between the colored compounds used for the foundation coat on the gossamer cloth of the kind in suit and those same compounds when used for the striping of gossamer cloth—that is to say, you seem to me to think that the term "ink" is fairly applicable to one and not to the other. Did you intend any such assertion or implication or do you think there is any difference whatever between the rubber compound forming the foundation film or coat and the rubber compound forming the striping film save only in the color?

Ans. I had no intention of conveying any such idea, and on reading over Int. 7 I find that I must have slightly misunderstood it when it was asked. I understood it as referring to the use of such inks or compounds in ornamenting the cloth, and not to the mere existence of such compounds, understanding that use only as the use called for in the patent and not as a general use of coating cloth.

Cross-int. 16. Is it your opinion that a piece of the ordinary gossamer cloth painted with rubber compound of a color differing from the color used for the foundation or first coating would embody any invention described or referred to in the Aldrich patent?

Ans. I should regard *that* this cloth as being substantially the same as that described in the Aldrich patent, various devices described therein being merely mechanical methods of doing that which can be done by hand.

Cross-int. 17. And you would answer in substantially the same way, would you not, as to a piece of gossamer cloth ornamented with a rubber compound of a different color applied by a suitable pen, so that the process would be in all respects the same as writing or drawing with a pen, and this whether the pen were held in the hand of the ornamenter or held by suitable mechanical devices?

12 Ans. I should.

Cross-int. 18. And you would give the same answer as to a piece of gossamer cloth ornamented by a stencilling process, would you not?

Ans. Stencilling, printing, painting, marking with a pen, pressing from rollers, pressing from a copper plate, and any other device by which pigment is conveyed from a surface or receptacle to the surface of another body I should regard as equivalent to each other for such purposes. They all have grown from simple hand-work and have been adopted as methods of more quickly performing such work or of more quickly multiplying copies of such work.

Cross-int. 19. Please explain clearly and briefly as you can what you think the invention or discovery is which you believe you find in the Aldrich patent in suit.

Ans. Briefly, I think the invention is the use of a pigment for ornamenting the surface of gossamer cloth of substantially the same composition as a pigment or compound which was used for coating the cloth in forming the ground in order that the ornamentation may stand the same usage as the ground coat, contracting and expanding in the same manner and forming a coating that is practically homogeneous with the ground.

Cross-int. 20. It seems to me that you have defined with substantial correctness in your preceding answer the end which Aldrich sought to accomplish—that is, what was obvious for many years before 1883 was desirable to be done if only a practical way could be invented or discovered by which it could be done. Can you add anything to your preceding answer which will tend to show either that it was not obvious long before 1883, that you have described in your preceding answer, merely a desirable thing to be done or end to be accomplished, or which will tend to show what invention or discovery by Aldrich or anybody else was possible in this matter except as to how practically to do this thing, to produce these goods, attain this result, or accomplish this end?

Ans. As I understand invention it generally consists in a practical solution of some problem which may have been obvious long before the date of the invention, but which solution no one has previous to this date reduced to practice; and it is, unfortunately, the case that in the large majority of cases that as 13 soon as the method is pointed out it becomes perfectly plain how the thing should be accomplished.

Direct examination resumed:

Int. 21. If you have specimens of comb-graining tools and bits of striped rubber cloth the stripes of which the combs fit will you please produce them as exhibits?

Ans. I produce two comb-graining tools and two pieces of cloth.

(The same are offered as exhibits and marked "Exhibits Comb-Graining Tools and Cloth Nos. 1 and 2.")

Int. 22. Whether or not any other tool for graining has been in use prior to 1883; and if you can produce a specimen please do so.
Ans. There is another tool been used for graining which I here produce.

(The same produced, offered in evidence, and marked "Exhibit Graining Roller.")

Cross-examination resumed:

Cross-Int. 23. You do not mean to imply that the pieces of gossamer cloth attached to the graining tools, marked "Exhibits Comb-Graining Tools and Cloth Nos. 1 and 2," are samples of gossamer cloth made by those tools or by the graining process, do you?
Ans. I do not; I merely put them in as exhibits showing conveniently the character of work that may be done by such tools.
Cross-Int. 24. Is it your opinion that it is practical or even possible to produce gossamer cloth like those samples by the graining process?
Ans. I do not think it is practical. I think it is possible on a small scale.
Cross-Int. 25. And you also think, if I understand you, that those specimens so made by the graining process would embody the invention or discovery which you think you find in the Aldrich patent?
Ans. I do.

S. P. SHARPLES.

Attest: STEPHEN THACHER,
Special Examiner.

14 Counsel for complainant offers in evidence assignment from Frank E. Aldrich to Wilbur F. Brigham, trustee, of United States letters patent No. 283,057; and it is agreed that a copy of said assignment may be substituted (in place of said original) upon the files of the court.
Attest: STEPHEN THACHER,
Special Examiner.

Deposition of Frank E. Aldrich.

Nov. 15, 1887.

Direct examination by THOMAS W. CLARKE, Esq., of counsel for complainant:

Int. 1. Please state your name, age, residence, and occupation, and whether or not you are the same Frank E. Aldrich who appeared as patentee in letters patent No. 283,057, dated Aug. 14, 1883, for rubber cloth or fabrics.
Ans. Frank E. Aldrich; thirty-three years of age; residence, Newtonville, Mass.; occupation is, interested in manufacturing mill

supplies or specialties for cotton mills; I am the Frank E. Aldrich who appears as patentee in the patent named.

Int. 2. What was your occupation during and for some years before the year 1883, when said patent was obtained?

Ans. Manufacturing gossamer goods.

Int. 3. When did you first go into the business of manufacturing gossamer goods, and how long did you continue in said business?

Ans. I think we started in 1879 or 1880—I think it was 1879—and continued in it until the summer or fall of 1884.

Int. 4. Did you at any time manufacture any goods of the sort described in said letters patent; and, if so, were said goods merchantable and marketed, and to what extent?

Ans. I manufactured goods of this character which were merchantable and were marketed. I have never looked it up to say, but there was some considerable quantity of the garments made.

Int. 5. Do you recall any person to whom these garments were sold; and, if so, who was it?

Ans. I remember sending some to Jordan & Marsh. I should have to look up my old records, if I have preserved them, to see just to whom I sold goods to. They were not the only people I sold them to. I sold them to anybody, wherever I got an opportunity.

Int. 6. For how long did you run these goods on the market?

Ans. Probably a year to a year and a half, to the best of my recollection.

Int. 7. Was the quality of the goods satisfactory?

Ans. As satisfactory as any class of goods that I made.

Int. 8. Have you any samples of the material and patterns of these goods—of printed goods? If so, please produce them.

Ans. These are some of them.

(The samples produced by the witness are offered in evidence and marked "Aldrich samples.")

Int. 9. Did you have other patterns, designs, than these?

Ans. Yes, sir.

Int. 10. By what method of printing were these designs applied to the rubber cloth?

Ans. Engraved copper rolls.

Int. 11. At the time when you went out of the gossamer-rubber business, in 1884, what was the condition of the gossamer-rubber trade?

Ans. Somewhat demoralized—that is, prices were being broken; there was a heavy stock of goods in the market and manufacturers were unloading and taking any price they could get for their goods.

Int. 12. About how long had that discouraging condition of the rubber-goods market prevailed?

Ans. I should say it was the fall of 1882 it began to drop off, but the spring of 1883 was the time of the most discouraging condition. I don't know that I would say the spring of 1883 was the most discouraging condition. What I mean by the "most discouraging condition" is that our orders began to drop off in the fall of 1882, but in the spring of 1883 they began to cut prices, and from that it was a dropping-off time.

16 Cross-examination by JAMES E. MAYNADIER, Esq., of counsel for defendants:

Cross-int. 13. By gossamer goods do you include articles as heavy as rubber blankets, horse-cloths, or other sheets of textile fabric coated with rubber? If not, where do you draw the line, as near as you can state?

Ans. Articles commonly known in the trade as gossamer goods are light-weight rubber goods or those made on the knife machine in contradistinction to the calender; where they come together, light-weight calender goods and heavy gossamer goods, it is hard to tell where to draw the line.

Cross-int. 14. Did you ever have any experience in rubber manufacture of other than gossamer goods?

Ans. No, sir.

Cross-int. 15. In some of the Aldrich samples I see what I believe to be what is commonly called bronzing powder—some of brass or gold color and some of silver. Do you know whether that was applied in the form of a powder or not?

Ans. It was mixed with rubber gum or solution of rubber. It was not applied dry, but mixed with rubber solution.

Cross-int. 16. Did you see the goods of which these samples are samples printed?

Ans. Yes, sir.

Cross-int. 17. Were the copper rolls held in the hand or did they form part of the usual roll printing machine?

Ans. They formed part of a printing machine while they were being used.

Cross-int. 18. Where were the goods coated and where printed? I mean these "Aldrich samples."

Ans. They were coated in Allston, printed in New York.

Cross-int. 19. How were they prepared on the knife machine—that is, how did their preparation differ, if at all, from the usual gossamer goods before they were sent to New York?

Ans. I couldn't say at this moment, sir, how they did differ.

Cross-int. 20. Do you know that they differed at all in substance?

17 Ans. They were coated with a solution of gum on the knife machine, with a special gum solution; no other difference that I recall.

Cross-int. 21. What was done with the goods after they were coated and before they were removed from the knife machine?

Ans. Nothing done with them after they were taken off the machine except packing and shipping them.

Cross-int. 22. Why were they not ruined by sticking together? Was that the cause of the special rubber solution used?

Ans. It was partly in the preparation or coating solution, partly owing to the fact that we didn't put two coated surfaces together, but rolled them up face to back.

FRANK E. ALDRICH.

Attest: STEPHEN THACHER,
Special Examiner.

18 *Evidence for Defendants.*

Taken pursuant to the sixty-seventh rule of the Supreme Court of the United States, in equity, as amended, before me, William A. Copeland, special examiner.

BOSTON, *Dec.* 14, 1887.

Present: Thomas W. Clark, Esq., of counsel for complainant; James E. Maynadier, Esq., of counsel for defendants.

Deposition of Theodore H. Videto.

Direct examination by JAMES E. MAYNADIER, Esq., of counsel for defendants:

Int. 1. What is your name, age, residence, and occupation?

Ans. Theodore H. Videto; fifty-three; Hudson, Mass.; superintendent at the defendants' rubber factory.

Int. 2. What experience have you had in the manufacture of rubber goods? And explain the state of the art of making gossamer fabrics, stating, first, what gossamer fabrics are, and, secondly, what varieties of such goods were in the market prior to the date of the patent in suit.

Ans. I have been engaged in the manufacture of gossamer fabrics for upwards of seven years. Gossamer fabric, so called, is a woven fabric of any suitable material, coated with successive films of rubber compound, containing sulphur or other vulcanizing material, and afterwards exposed to solar or artificial heat for the purpose of hardening or vulcanizing its surface. The varieties in the market prior to the date of the patent were commonly known as plain black gossamers with a lustrous or dull finish. There were also another class of heavier make, white.

Int. 3. Please describe, briefly, the mode of manufacture of the different kinds of gossamer fabrics which were in the market prior to the date of the patent in suit.

19 Ans. A web of cloth of suitable and desired length was distended between two rollers supported in suitable frames, one frame at the farther end being movable so as to give a suitable tension to the cloth. In front of the other roller, about a foot distant, was placed a straight-edged knife made of steel or other suitable material, having gauges at its extremities arranged according to the width of the cloth desired to be coated or covered with rubber. This knife was held by suitable supports in the frame. The rubber compound, formed of rubber and suitable pigments, dissolved in naphtha to the consistency of thin mortar, was

placed in front of the knife and the web or endless belt was made to revolve under the knife as many revolutions as was desired to put on successive films or coats of rubber compound, usually from six to twenty, according to the quality desired. The knife was then removed and the compound remaining in front of it and another knife just like the one removed put in its place, and a solution made of paraffine and naphtha was poured in front of the knife, when the cloth was made to revolve one revolution only. This finishing coat served the double purpose of giving to the fabric a more lustrous surface and prevented the cloth from being injured (because of its sticky or tacky nature) when rolled up. The cloth was removed, and at convenience put out in the sun to vulcanize. The other modes of manufacture were similar, except in the finish. Instead of paraffine or wax being applied the farina, preferably corn starch, was spread with the knife upon the rubber surface and afterwards dusted or brushed off by suitable revolving brushes or by hand. The fabric was then cleansed or washed with a thin solution of naphtha and paraffine as before, giving the cloth a dull or lustreless finish. It was afterwards removed and vulcanized by solar or artificial heat.

Another kind was made in the same manner except as to finish. Instead of the paraffine finish, or farina and paraffine finish, the surface was coated with farina or potato starch and afterwards brushed, leaving the surface a sparkling, lustrous surface, presenting a silvery appearance, now known as electric gossamers.

Int. 4. What was the first attempt to make gossamer fabrics with an ornamented surface, and when was this attempt, and with what success? And produce, if you have it, a sample of the goods.

Ans. The first attempt was by printing, and first came to my knowledge in 1880 and was purported to have been done under the Brigham patent. I produce a sample which came into my possession about December, 1880. It proved a failure and was abandoned.

(The sample produced is now put in evidence and marked "Defendants' Exhibit Videto's Brigham Sample, W. A. C., sp'l ex'r.")

Int. 5. What patent do you refer to as the Brigham patent? Give its number and date and produce a copy.

Ans. Patent No. 226,031, dated March 30, 1880. I produce a copy.

(The patent is now put in evidence and marked "Defendants' Exhibit Brigham Patent, W. A. C., sp'l ex'r.)

Int. 6. Where did you get Exhibit Videto's Brigham Sample, and in whose possession has it been since you got it?

Ans. J. H. Diggles, of New York, gave it to me, and it has been in my possession ever since.

Int. 7. What was the next attempt to produce these gossamer fabrics with an ornamental figure or design? And state what you know as to that.

Ans. The next attempt was reputed to be by Aldrich, by printing, and it also proved a failure.

Int. 8. Where and when was this?

Ans. It was at Allston, Mass., in 1883.

Int. 9. Have any printed gossamer fabrics ever come into the market?

Ans. I have never heard of any under the Brigham patent, and never but one or two of the Aldrich patent; in fact, never but one garment.

Int. 10. My question was intended to extend to the present time and relate to all printed gossamer fabrics.

Ans. There has lately appeared in this country a printed gossamer, but that is totally different from either the Brigham or Aldrich fabrics in that the surface is first coated with farina or potato starch and afterwards printed by machinery especially made for that purpose and is a secret process. These latter printed gossamers are the only ones made by the printing process of any value whatever, so far as I know.

21 Int. 11. What invention or discovery, if any, is described in the Brigham patent, so far as you are able to determine?

Ans. The Brigham patent describes a gossamer fabric printed with any kind of ink of a contrasting color, and, in my judgment, has in it nothing of invention or discovery.

Int. 12. What invention or discovery, if any, is described in the Aldrich patent in suit, so far as you are able to determine?

Ans. The Aldrich patent, so far as its specification and claim 1 go, is the same as the Brigham patent for printing a gossamer fabric with any kind of ink of a contrasting color.

Claim 4 is the fabric printed or stamped and varnished, and in this I can see no discovery and invention; neither patent sets forth any instructions as to how this printing may be done.

The other claims are based upon the idea that there is some novelty or invention in printing with an ink composed of rubber and other ingredients. There may possibly be some invention in this, but I very much doubt it, for the reason that rubber compounds used as printing inks on gossamer fabric are impracticable because of their viscidity. Printing or stamping has long been known.

Int. 13. What knowledge have you as to printing or stamping upon rubber articles? And please include in your answer not only the application of colored fluid compounds by type or stamps or their equivalent, but also by means of brushes as in painting and by means of a brush and stencil plate as in stencilling.

Ans. Printing or stamping and stencilling have been in common use for many years, to my own knowledge, upon such articles as hose, rubbers, rubber bottles, and most all kinds of rubber articles and mechanical appliances made of rubber. The ink is made of suitable material, without oil, which is injurious to the fabric, and when composed of rubber as an ingredient in such small quantity as to destroy its viscidity.

Int. 14. How does the compound described in lines 40–45 in the first column of the specification of the Aldrich patent in suit differ, if at all, from compounds in general and common use prior to 1881?

Ans. Only in one particular. Here the rubber is dissolved and the other ingredients added, whereas the universal practice is to grind the pigment into the rubber before being dissolved.

22 Int. 15. Which gives the best and most thorough mixture of the ingredients?

Ans. By grinding the pigments with the rubber until it becomes a perfectly homogeneous mass.

Int. 16. Is any gossamer fabric now made or so far as you know has any ever been made in which the rubber coating was applied to the woven cloth or fabric by means of rollers, blocks, or any other like manner?

Ans. I have never seen or known of any, except with a knife-coating machine.

Int. 17. State whether it is a practical way of making gossamer fabric or not—I mean to apply the rubber compound to the cloth by means of rollers, blocks, or the like—and give your reasons briefly.

Ans. I think not. I do not see how a rubber compound could be used upon a roller except in a thin, semi-fluid state, and this could not be transferred or impressed upon the cloth with a smooth surface, because of the tacky or sticky nature of rubber. The pressure of the ink roller would of necessity mar the surface and leave it rough and uneven. I have tried on many occasions to do this and know it cannot be done. What I have said about rollers applies to the other devices mentioned in the question.

Int. 18. Are you familiar with letters patent No. 179,491, dated Dec. 14, 1875, to Dunbar and Lothrop? If so, state how the ornamental strips of rubber compound described in that patent differ, if at all, from the compounds used in the manufacture of gossamer fabric.

(The patent is now put in evidence and marked "Defendants' Exhibit Dunbar and Lothrop Patent, W. A. C., sp'l ex'r.")

Ans. I am. The only difference is that under the Dunbar and Lothrop the compound is not dissolved in naphtha.

Int. 19. Please explain how the defendants' striped rubber fabrics are made, stating first as to the goods from which the garment referred to by Professor Sharples is made, and next as to the pieces marked "Exhibits Samples, Samples 1 and Sample 2."

(The exhibits as above marked are now put in evidence.)

Ans. The exhibit produced by Professor Sharples was
23 made by me in the following manner: The fabric was coated
in the ordinary manner of coating black cloth by means of a straight-edged knife, as I have before described. The finishing coat was put on in the form of stripes in the following manner: In the place of the straight-edged knife I placed a trough-shaped knife, of which I here produce a section stamped with the same die used for making the knife of Sharples' exhibit; rubber compound of a contrasting color, namely, blue, of the same quality of the base or

foundation coating, was turned into the trough and the cloth made to revolve under the trough knife one revolution. The blue stripe escaped through the openings, as shown in the section I produce, and escapes and is spread upon the cloth through the channels filed in the bottom, the bars leaving the fabric of the base or foundation color. The trough knife and surplus compound was then removed and I applied a coat of corn starch. The surplus or that which did not adhere to the rubber was brushed away by means of a revolving brush. The straight-edge knife was now replaced and a solution of paraffine, wax, and naphtha was placed in front of the knife and by its use the remaining starch or farina was washed off, leaving a soft, velvety finish, usually termed dull finish. I here produce a garment made by the same process and the same identical knife as Sharples' exhibit. I should have said that after the cloth was cleansed or washed in this manner by the naphtha and paraffine it was rendered non-adhesive, rolled up, put out in the sun, and spread out upon tables to be vulcanized.

(The section of knife produced is here put in evidence and marked "Defendants' Exhibit Trough Knife Section, W. A. C., sp'l ex'r," and the garment produced is put in evidence and marked "Defendants' Exhibit Trough Knife Garment, W. A. C., sp'l ex'r.")

I here produce a piece of gossamer fabric, made according to the foregoing description of my invention illustrating the process. The part marked No. 1 of this exhibit represents the cloth coated in the ordinary manner. No. 2 of the exhibit shows the same piece of cloth striped, with the identical knife that striped the Sharples garment, here left in its unfinished state without the farina or corn starch and cleansing process. No. 3 represents the third stage in the process, the striped fabric, covered with corn starch, not washed
nor cleansed. No. 4 represents the striped fabric, cleansed or
24 washed, ready for vulcanizing. It will be noticed by examining the back of this piece that it is one continuous and undivided fabric, showing the process by which my India stripes are made.

(The piece is now put in evidence and marked "Defendants' Exhibit Illustrative Strip, W. A. C., sp'l ex'r.")

Exhibit samples were made in precisely the same manner, except that a part of them were striped with a different kind of knife, also my invention. This knife has a serrated or notched edge, and this piece which I here produce is an exact reproduction of the knife by which two of the exhibit samples were made.

(The section produced is now put in evidence and marked "Defendants' Exhibit Notched Knife, W. A. C., sp'l ex'r.")

Exhibit Samples 1 were all made precisely in the same manner as exhibit marked "Illustrative Strip." Exhibit Samples 2, made by my notched knife, differ in this respect. The compound, instead of being turned in a trough knife, is placed in front of this notched knife in a machine and the cloth made to revolve one revolution.

As it moves along under this knife the portion of the compound appearing on this exhibit as a black stripe escapes through the notched part, while the projecting portions spread a very thin film on that part which lies between the black lines. The cloth is then finished in the ordinary manner for finishing dull finished goods.

Int. 20. How many colors can be made upon the same piece of goods by the process and apparatus described in your last answer and what modification is necessary to produce a greater number?

Ans. Quite a number; the only modification necessary in the trough knife is that partitions are required between the openings, as shown in an exhibit which I here produce; said exhibit is a section of a trough knife with the sides taken off for convenience, which has been in actual use and by which I have made three colors.

(The section is now put in evidence and marked "Defendants' Exhibit Partition Trough Knife, W. A. C., sp'l ex'r.")

Int. 21. What patents, if any, have been issued or allowed for your process, apparatus, or product?

Ans. A patent has been issued to me for the notched knife and official notice has been received of the allowance of a patent for my trough knife, also for the fabric itself, and another for the process.

25 Int. 22. What is the date and number of the patent issued, and what will be the date of those allowed?

Ans. The date of the one issued is Oct. 4, 1887, and the number 371,155. The others will issue Dec. 20, 1887.

Int. 23. Why is the Sharples garment so inferior?

Ans. Because when that was made I had commenced using a different kind of rubber and the pigments used acted differently from what I supposed, namely, as a drier, whereas a sufficient quantity of vulcanizing agent had been incorporated with the rubber. Although soft and pliable when made, I soon found that it became brittle and abandoned its use and have since used only best Para rubber, and since that time have never seen or known of a single yard of the cloth or a garment made therefrom but has remained as soft and pliable as Exhibit Trough Knife Garment, although hundreds of thousands of yards have been made and sold.

Cross-examination by Thomas W. Clarke, Esq., of counsel for complainant:

Cross-int. 24. What had been your business before you engaged in the manufacture of gossamer fabric upwards of seven years ago?

Ans. I had been engaged in the manufacture and sale of the well-known and celebrated electric Garrett disk, and was manufacturer and proprietor, and in the sale of the East India remedies.

Cross-int. 25. What was the electric Garrett disk well known and celebrated for, and to whom was it well known?

Ans. It was celebrated specially for rheumatic troubles and was known to very many, if not all, of the prominent druggists in every New England State, and many other States where I sold it.

Cross-int. 26. A dear kind of a horse chestnut, wasn't it?

Ans. I don't understand the question.

Cross-int. 27. What do you consider to be a suitable material of woven fabric of gossamer fabric?

Ans. Foulards that have been properly calendered and singed are proper; also any light, closely woven, soft fabric that has a perfectly smooth surface and without nap so called.

Cross-int. 28. Must necessarily a gossamer fabric which is
26 exposed to solar rays be exposed to such solar rays as impart
heat greater than the average heat of the year?

Ans. No, sir.

Cross-int. 29. Must necessarily a gossamer fabric contain sulphur or other vulcanizing material?

Ans. Yes, sir.

Cross-int. 30. Must this material be incorporated in the coating of the fabric before exposure to solar or artificial heat?

Ans. It must in the case of solar, but not artificial—that is to say, all gossamer rubber-coated fabrics not cured by solar heat must have a vulcanizing agent, but if cured by the vapor process, where heat is used, it does not require to be incorporated with it.

Cross-int. 31. By the vapor process do you mean the process which employs bisulphide of carbon and chloride of sulphur?

Ans. I do.

Cross-int. 32. Are not those employed more usually at ordinary temperatures?

Ans. They may be employed either way.

Cross-int. 33. Have you ever employed in your business the chloride of sulphur and bisulphide of carbon process?

Ans. I have.

Cross-int. 34. In what year?

Ans. I think 1881.

Cross-int. 35. Have you been continually engaged in the manufacture of gossamer fabrics since 1880?

Ans. With the exception of a few months I have.

Cross-int. 36. During that time has your factory not been shut down?

Ans. Shut down for short intervals.

Cross-int. 37. Has your factory not been shut down at least two-fifths of the time since the year 1880?

Ans. No, sir.

Cross-int. 38. Please state from what dates to what dates, since Jan. 1, 1881, your factory has been shut down.

Ans. From Jan. 1, 1881, to February, 1885, I think, the longest
period I remember of its being shut down was for a few
27 weeks between seasons—that is, between spring and fall
trade and fall and spring trade.

Cross-int. 39. In the year 1880 were these goods of heavier make, white, called gossamer goods?

Ans. Yes and no. Some called them gossamer and some as calendered goods, and they are known by both names now.

Cross-int. 40. Were they made by the same parties who made the black lustrous or dull-finished gossamers?

Ans. In some places they were.

Cross-int. 41. In what cases? Give the name of the manufac*fact*urer who made both kinds of goods.

Ans. The Para Company of Framingham, I think, the American of Cambridge, and other factories, I have been informed, who make calendered clothing and gossamer goods as well.

Cross-int. 42. Were these goods of heavier make, white, made on the knife machine in the manner described by you in answer to Int. 3, or does the answer to Int. 3 apply solely to the black gossamer goods, lustrous or dull, referred to in your answer to Int. 2?

Ans. I have only described the process for making light-weight gossamer goods.

Cross-int. 43. You have not, then, described the process for making another class of heavier make, white, as such goods were made in 1880, have you?

Ans. I have not, although I can.

Cross-int. 44. Have you ever yourself manufactured rubber goods except by the aid of the knife machine?

Ans. Yes; by the aid of the knife and roller, after the manner of the English method for making light or heavy goods.

Cross-int. 45. You have always used the knife, however, for spreading the compound on the cloth, haven't you?

Ans. Yes.

Cross-int. 46. In making the calendered goods the knife is not used, is it?

Ans. I am not familiar with the process of making goods by the use of calenders.

28 Cross-int. 47. When did you first know of the use of potato starch as a finish for gossamer fabrics?

Ans. The first garment that I recall was an imported English garment, about four years ago.

Cross-int. 48. I notice in your answer to Int. 3 you speak in one place of farina, preferably corn starch, being applied to the surface, and in another place you speak of farina or potato starch being applied to the surface, and in the last instance you say that the surface is a sparkling, lustrous surface, presenting a silvery appearance, now known as electric gossamer. Does the farina, which is preferably corn starch, produce the same surface as the farina which you term farina or potato starch?

Ans. Not at all.

Cross-int. 49. Then you didn't know in 1880 or 1881 the potato-starch surface, now called electric gossamer, did you?

Ans. No, sir; not in 1881. I have said the first I saw was in 1883, four years ago.

Cross-int. 50. When did the Brigham attempt at ormentation by printing prove a failure—before or after December, 1880?

Ans. It may have been before, and it was at that time a failure—December, 1880. At least, so I was informed by one of the owners of the patent.

Cross-int. 51. Who so informed you?

Ans. W. F. Prusha, one of the owners.

Cross-int. 52. Who was J. H. Diggles, of New York?

Ans. He was a merchant who sold cloth for rubber coating.

Cross-int. 53. At the time he gave you the sample produced was it all he had?

Ans. I could not say. He gave me about half a yard.

Cross-int. 54. Then the cloth made under the Brigham patent had got as far as the dealer in 1880, had it not?

Ans. I think not.

Cross-int. 55. Wasn't Diggles a dealer?

Ans. Diggles was a dealer in uncoated cloth. He may have sold gossamers for aught I know.

Cross-int. 56. When did you first see the goods made by Aldrich?

29 Ans. In 1883.

Cross-int. 57. Do you mean to be understood that because you never saw but one garment made of Aldrich's goods that he did not make 100,000 garments of those goods?

Ans. Yes; I mean to say that he didn't, and can give my reasons.

Cross-int. 58. About how many garments do you think was the utmost that Aldrich could have made from his goods from the fact that you never saw but one garment?

Ans. I think he could not have made many and put them upon the market from the fact that his head New England salesman was my nearest neighbor in Hyde Park, his house not being more than thirty feet from mine, often talked with me about it, and my chief information was from him.

Cross-int. 59. (Question repeated.)

Ans. My answer about the one garment had reference to what he had placed upon the market and not what he may have made and kept in his store and factory. How many he made and kept in his factory or store I do not know.

Cross-int. 60. Do you mean to be understood that the garments made by Aldrich in 1883 and before and after, during a period of two years, were not put upon the market?

Ans. My answer applied only to goods made under the Aldrich patent.

Cross-int. 61. Do you mean to be understood that the garments made by Aldrich of gossamer fabrics with an ornamental figure or design during said period were not put upon the market to the number of many hundreds and in at least a dozen varieties of designs?

Ans. I do not know, but diligent inquiry for now nearly a year from parties travelling all over the country and familiar with all the leading houses throughout the country have failed to cite but one house, and that a single garment, until Mr. Aldrich himself gave his testimony, *when*, in reply to a question as to where he had sold them, could quote only one house himself, namely, Jordan, Marsh & Co.

Cross-int. 62. Was that the house that your inquiry had revealed?

Ans. No, sir.

30 Cross-int. 63. Was that the house where you heard of but one garment?

Ans. No, sir; it was a house, I think, in Buffalo, N. Y.

Cross-int. 64. Have you ever seen the manufacture of these printed gossamer goods which have recently appeared in this country and which have a farina or potato-starch coating?

Ans. I have, and have made the cloth with that kind of finish, and am running a few yards occasionally now.

Cross-int. 65. Do you mean by that a few yards of electric-gossamer fabric afterwards printed?

Ans. No, sir. The printing was not mentioned in the previous question.

Cross-int. 66. Please read the previous question and have the witness answer it.

Ans. I beg pardon, I did not hear the word "printed."

(Cross-int. 64 re-read.) I have not.

Cross-int. 67. When you say, concerning these printed electric goods, that the surface is afterwards printed by machinery especially made for that purpose, and is a secret process, do you wish to be understood that you know of your own knowledge that that process has not been fully explained in patents, or simply that you do not know what it is?

Ans. I mean I do not know of my own knowledge, but have been so informed, and am aware of the Moseley patent, under which it is said to be done, but that does not set forth the instructions for the construction of suitable machinery for such printing.

Cross-int. 68. Did you ever try to print with an ink containing India rubber upon a gossamer fabric?

Ans. I have, several times, upon gossamer fabric without the farina surface.

Cross-int. 69. And you always failed in it, did you?

Ans. I did.

Cross-int. 70. Because of the viscidity of the ink or because of the tackiness of the fabric?

Ans. Perhaps both; more especially the rubber compound when used as an ink.

31 Cross-int. 71. What sort of a rubber compound did you use as an ink? How did you make it?

Ans. Made in the same manner and was a part of the same compound as was used for the coating of the woven fabric.

Cross-int. 72. Which of the pieces in the package Exhibit Samples were made by Defendants' Exhibit Notched Knife?

Ans. The pieces which I have notched.

Cross-int. 73. I understand—you will tell me if I am correct—that Exhibit Samples 1 were all made with the trough knife?

Ans. Yes, sir; you are correct.

Cross int. 74. And Exhibit Samples 2 were made with a knife like Exhibit Notched Knife, was it not?

Ans. Yes, sir.

Cross-int. 75. The three colors made by the Exhibit Partition

Trough Knife would be the ground color left by the bands between the grooves in which the holes are situated, with a stripe on one side of each stripe of ground color of one tint and on the other side of each stripe of ground color of another tint, wouldn't it?

Ans. Yes.

Cross-int. 76. Do you consider yourself to be the first person to employ a notched or comb knife in the manufacture of striped gossamer goods?

Ans. Unquestionably I do.

Cross-int. 77. Do you consider yourself to be the first person to employ a trough knife in the manufacture of gossamer goods?

Ans. Unquestionably I do.

Cross-int. 78. At what time did you first employ the comb knife in the manufacture of striped gossamer goods?

(Objected to as immaterial, and also as an improper use of cross-examination; but inasmuch as this question may properly be raised in any suit for the infringement of the notched-knife patent, the witness is advised to answer the question, although he is also advised that he need not answer it unless he sees fit.)

Ans. In 1882.

32 Direct examination resumed:

Int. 79. I omitted to ask you to produce samples of the black cloth, electric goods, and dull-finish goods. Please do so.

Ans. I here produce them.

(They are now put in evidence and marked "Defendants' Exhibits Black Cloth, Electric Goods, and Dull Finish, W. A. C., sp'l ex'r.")

THEO. H. VIDETO.

Attest: WM. A. COPELAND,
Special Examiner.

Deposition of Albert H. Spencer.

BOSTON, *Dec.* 15, 1887.

Direct examination by JAMES E. MAYNADIER, Esq., of counsel for defendants:

Int. 1. What is your name, age, residence, and occupation?

Ans. Albert H. Spencer; fifty; Boston; I am a solicitor of patents, and am accustomed to testify as mechanical expert in the trial of patent causes.

Int. 2. How long have you had to do with inventions and patents, and how long have you been accustomed to testify as expert?

Ans. From fifteen to twenty years past. During the last fourteen years I have testified frequently in patent litigations. I have had considerable experience in the matter of patents connected with rubber manufacture in various forms, and in connection therewith I have frequently visited rubber factories and observed and been interested in their processes.

Int. 3. Are you familiar with the Aldrich patent in suit? If so, please state what invention or discovery is described in it, giving your reason for any opinions you may express and answering in view of the state of the art as known to you.

Ans. I am familiar with the Aldrich patent. One thing is reiterated throughout that patent, namely, the ornamentation of a rubber-surfaced fabric by printing or stamping and printing upon a
gossamer fabric or a rubber-surfaced fabric with an ink hav-
33 ing a percentage of rubber in it; but this is no invention, in
my opinion, and nothing approaching invention.

The specification opens with the statement, "My invention relates more especially to means for ornamenting the cloth or fabric, and it consists of a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces provided with useful or ornamental designs or figures printed or stamped thereon with an ink or compound of a different color or shade from the body of the fabric by means of rollers, blocks, or in any other suitable manner, the ink or compound preferably containing rubber, caoutchouc, gutta-percha, or some analogous material, as hereinafter more fully set forth and claimed."

The description then proceeds to mention various forms of apparatus by which the rubber fabric may be printed, preference being expressed for rollers for applying the color upon the rubber surface, but no device being alluded to other than well-known means for printing or stamping upon the fabric. This printing or stamping as a means of ornamenting the rubber surface runs through the entire specification and claims and no other method of ornamenting is in any place suggested. Aldrich seems to have supposed himself entitled to a monopoly of printing or stamping upon a rubber-surfaced fabric and his specification is drawn throughout with that in view.

There is no invention in this. He simply followed the suggestions contained in the prior patent, Exhibit Brigham Patent, of March 30, 1880.

The Brigham patent states, "Our invention consists of a light, thin fabric, woven or otherwise formed, covered with a water-proofing of rubber composition or a composition in all respects equivalent thereto, printed with ornamental colors and figures (embossed or plain) to resemble ordinary dress or similar goods." After a description of the ingredients composing the water-proofing composition or ground work of any color desired is the following language:

"This composition is spread upon the cloth in the manner well known in the art and forms a basis for receiving the colors and
holding them in sharp, clear lines without running or blurr-
34 ing and so as to make well-defined and ornamental figures.
On this prepared surface we print, in colors suited thereto and by ordinary machinery and means used for such purposes, such figures and shades as may be desired. In addition to this ornamentation we may also apply the mode of embossing described in our

patent heretofore referred to. Whether this embossing be used or not the product is a desirable imitation of figured goods in ordinary colors and having what may be called a 'cloth surface,' as in our former patent heretofore referred to, and all the colors and beauty of appearance of such ordinary dress and similar goods, with the valuable quality, in addition, of capacity to resist or repel moisture." The Brigham claim is, "A water-proof fabric for dress and other goods having a surface of the described water-proof composition and impressed with figures and colors, as set forth."

The Brigham patent describes an ordinary rubber compound suitable for a surface coating for gossamer fabrics, and also describes printing thereon well-defined and ornamental figures in colors suited thereto and by ordinary machinery. I therefore say that in view of the Brigham patent alone there is no invention set forth in the Aldrich patent, since it follows precisely in the track of the earlier patent to Brigham. There is nothing in the Brigham patent which excludes the use of any particular printing compound, providing it is "in colors suited thereto"—that is, adapted to be used upon the rubber surface.

The Aldrich patent expresses a preference for an ink or compound having a percentage of rubber, but this is not made essential to the series of claims.

Only the well-known rubber compounds are suggested in the Aldrich patent, either for the foundation or the ornamentation, so that there is no invention in that respect, nor is there in the vulcanizing nor in the use of sulphur nor in the coating of the fabric on both sides. There is no suggestion of any improved means for printing upon the rubber surface nor an intimation of any difficulty in such printing by ordinary means.

In my opinion there would be serious difficulty in printing with rubber upon rubber by means of "engraved rollers, blocks, types, dies," or by any apparatus coming under the head of means
35 for "printing or stamping," hence I regard the Aldrich patent
as fatally defective in failing to instruct the public how to carry out this printing or stamping, so that it could be practised without experiment, but no suggestion on this head is to be found in the Aldrich patent. If Aldrich knew how to carry this process into effect he should have explained it. His failure to make this clear is an omission of something essential and makes the patent inoperative if it is construed as limited to printing upon the rubber surface with a compound containing a percentage of rubber in distinction from any and all other compounds.

Int. 4. Are you familiar with the goods made by defendants and their mode of manufacture? If so, please state what, if anything, contained in the Aldrich patent is copied or embodied in such goods or in their mode of manufacture or in any apparatus or compound used in the manufacture of defendants' goods.

Ans. I am familiar with the goods made by defendants, known in the market as India stripes, and with the process and apparatus by which such goods are produced, having witnessed the practical operation in all its stages and by the various means employed. The production of the India-stripe gossamer fabrics has been clearly described by Mr. Videto, so that it is unnecessary to describe it in detail. That process, however, is totally unlike printing or stamping practised by the use of any form of apparatus by which printing or stamping can be carried out. The distinctive peculiarity of the defendants' method of manufacture relates to the application of stripes of rubber compound in solution upon a prepared surface of rubber compound of a contrasting color. The means essential to this method or process are either of the two forms of knives, Defendants' Exhibit Notched Knife and Defendants' Exhibit Trough-Knife Section, or the knife Defendants' Exhibit Partition Trough Knife. These novel forms of knives for applying the finishing striping compound hold a body of the liquid rubber compound in solution at a specified point, while the web of coated fabric is moved beneath and in contact with such knives to receive the limited portion of the striping compound escaping through the recesses of the knives upon the contiguous moving rubber surface.

With a knife like Exhibit Notched Knife the rubber solution
36 is poured in considerable quantity upon the fabric in front of the knife and remains thereon while the fabric makes one complete movement around the rollers, which distend, support, and move it, after which the surplus is carefully removed, leaving a small section of the fabric—perhaps half a yard—worthless. With either of the other knives the striping compound is held within the trough, while the fabric moves beneath it and the surplus is removed with and in the knife, the stripes having been applied through the perforations and grooves ot the bottom of the trough.

With either of defendants' knives a mass of the striping compound is held at a point where the cloth prepared to receive it is carried rapidly beneath it and rubbed closely and with friction against the lower edge of the knife, so as by this mechanical operation to thoroughly incorporate the striping compound with the fresh compound previously covering the entire surface of the fabric.

I have no hesitation whatever in saying that this knife-coating process of striping rubber-surfaced fabrics is wholly unlike any printing or stamping operation and the knives themselves wholly unlike any known means for printing or stamping and radically different in construction and mode of operation from "engraved rollers, blocks, types, dies," or any conceivable printing or stamping device. The fabrics produced by the defendants' knives and process are also radically unlike the product of any process or apparatus set forth in the patent in suit and are readily distinguishable from any fabric which could be printed by the "rollers, blocks, types, dies," and so forth, as mentioned in the Aldrich patent. In both cases the process so inheres in the product that it could be distinguished at a glance by its appearance.

Int. 5. State what you know as to the use of colored fluid compounds upon rubber surfaces prior to 1881.

Ans. I know, what I suppose is a matter of common knowledge, that for many years prior to 1881 rubber surfaces have been marked or ornamented by various-colored compounds applied in a fluid state, either by means of stamps or by brushes, as in painting or in stencilling. These applications of such compounds are common and have been for very many years on rubber belting and hose, 37 on rubber boots and shoes, on rubber water bottles, blankets, and so forth, for what might be termed useful purposes, in the marking of numbers, sizes, or names, as well as in the more ornamental uses, as in the coloring of rubber balls, dolls, and other toys. The patent to Dunbar and Lothrop, dated Dec. 14, 1875, describes an ornamented rubber surface in which strips in the form of various designs or figures are applied to and embedded in the face of the article. In this patented product the matter is described as a part of the material composing the ornamental strips or figures. I quote from the description: "The invention consists of a product composed of a baser foundation of cheap compound of rubber overlaid or inlaid with a series of strips, figures, or characters of a thin and more expensive material, which is capable of receiving any desired color or tint, these strips or figures being in the final stage of the vulcanizing process embedded in the foundation, so that a uniformly even surface exists over the whole." This patent, then, discloses a rubber-surface article ornamented with strips, of other designs, made of rubber compound of a color contrasting with the ground-work or body and vulcanized with the ground-work.

Cross-examination by Thomas W. Clarke, Esq., of counsel for complainant:

Cross-int. 6. What gossamer-rubber factories have you visited in such a way as to see the work that was going on?

Ans. The Ætna rubber mills, in Jamaica Plain; the works of the Cable Rubber Co., also in Jamaica Plain, and the factory of the defendants, at Hudson. I have done patent work on gossamer fabrics for the Hall Rubber Co., at Watertown, and for Mr. Henry W. Burr, lately of the Para Rubber Co., but without witnessing the work in these latter two cases.

Cross-int. 7. When did you see the operation of making gossamer fabrics at the Ætna rubber mills?

Ans. I think in the year 1880, when I was doing work for Mr. Wheeler Cable, at that time superintendent for the company.

Cross-int. 8. At what time did you see the work of making gossamer fabrics at the Cable factory?

38 Ans. I have no means of fixing the dates; but, as those works have been in operation but three or four years, it must be within that period.

Cross-int. 9. Will you please describe the work which you saw done at the Ætna rubber works in making gossamer fabrics?

Ans. The part of the work which I saw in actual operation was the spreading and exposure of the coated fabric for vulcanization by solar heat.

Cross-int. 10. Did you see the whole process of spreading? And please describe what the process was of spreading that you did see.

Ans. I think I saw it all. I at least saw rolls of the uncured gossamer goods brought into the yards, unrolled, and spread in the sun, with the rubber surface exposed to the light and heat, and other similar pieces, which had been similarly exposed, rolled up to be returned, cured, into the factory.

Cross-int. 11. You do not remember, then, to have seen at the Ætna works the compound put upon the cloth preparatory to this spreading and exposure?

Ans. I do not.

Cross-int. 12. When first did you see the work of coating the cloth of gossamer fabrics performed?

Ans. I have seen fabrics coated with rubber in calenders, by what is termed friction coating, for very many years. I should say first in 1866. Those fabrics were heavier than what is now termed gossamer goods, but they were woven fabrics, having a thin film of rubber compound applied to one side. I will not be positive that I had actually witnessed the coating process in the manufacture of thin gossamer fabrics until I saw it done in the defendants' works in the early part of the present year, 1887.

Cross-int. 13. So far as you know, the coating of gossamer goods, according as that name is used as a market term, is always done on a knife machine with dissolved rubber, isn't it?

A. It is always spread by a smooth-edged bar termed a knife, so far as I know. This plan, I know, was specified in a patent which I secured for Mr. Burr in the year 1881, as I recollect it.

Cross-int. 14. Goods coated with the calender machine are not usually called gossamer goods, are they?

Ans. No.

39 Cross-int. 15. Goods coated by the calender machine are usually coated with undissolved rubber, are they not; or, at any rate, with a rubber paste of much greater consistency than that used for gossamer goods?

Ans. Yes.

Cross-int 16. Do you not find the ink in which the useful or ornamental designs or figures of the Aldrich patent are described to be printed or stamped upon the surface to be referred to in the second, third, fifth, and seventh claims of the Aldrich patent as an ink containing rubber?

Ans. Claims 2 and 3 specify as an ingredient of the ink rubber, caoutchouc, gutta-percha, or some analogous substance.

Claims 6 and 7 specify rubber and sulphur or some ingredient for vulcanizing the rubber. Each of the claims named uses the word "rubber" in describing the ink.

Cross-int. 17. Now, in the fifth claim the ink is said to be analogous to the coating of the cloth, and the cloth is said to be a rubber cloth or compound wholly or in part of rubber, isn't it?

Ans. Yes.

Cross-int. 18. Now, in trying to follow the Aldrich patent, as set up in the second, third, fifth, sixth, and seventh claims, a person as well skilled in the art as yourself would not be likely to omit rubber from the ink, would he?

Ans. The Aldrich patent, no doubt, expresses a preference for rubber as an ingredient in the composition of the ink, and a person studying and seeking to follow that description and to employ the substances mentioned in the majority of the claims would be likely to try a compound containing rubber, much as one would in following the Brigham patent and seeking to print upon the rubber foundation with a compound adapted thereto might take either one of the three compounds described in that patent and use it as a coloring matter to ornament a foundation coating made of either of the two other compounds specified therein.

Cross-int. 19. Do you mean by all that that in your deliberate judgment as a person skilled in the art in the year 1880 that the Brigham patent contained just as much advice to the manufacturer to use an ink containing rubber as the Aldrich patent of Aug. 14, 1883, did in that year?

Ans. No; I don't mean that, but I mean that whereas the Brigham patent, after describing as an improvement the printing of any ornamental design upon a rubber-coated fabric in colors suited thereto, describes three different-colored compounds which evidently might be placed one over another, being thus adapted to unite each other, it would require but the slightest invention, if any whatever, to employ one of those compounds to print upon or ornament the other.

Cross-int. 20. I produce for your inspection a few samples of gossamer rubber goods which are ornamented more or less with stripes of different color from the ground-work, which set of samples are marked "Complainants' Exhibit Stripes," and I ask you whether or not, in your judgment, the striping upon those goods could have been produced by roll printing with ink of contrasting color.

Ans. I don't come here and pretend to be an expert in rubber goods. I am not familiar with the different methods of ornamenting those gossamer fabrics which have of late made their appearance, the peculiarity of which is a lustrous or partially lustrous surface with ornamental designs of various sorts printed thereon. I am, therefore, hardly prepared to say whether or not, on the starch-finish surface peculiar to many of these samples, ornamental designs could be produced by printing, as specified in the question. I see no sample here which appears to me to have been printed with ink by an engraved roller, the roller transferring the ink from its engraved portion to the surface of the fabric.

Cross-int. 21. You spent some time in examining each sample and used a pretty strong magnifying glass in your examination, did you not?

Ans. I ran them over hastily with a glass of fair moderate power.

Cross-int. 22. You did a little more than glance at them, didn't you?

Ans. Yes.

(Adjourned.)

41 Dec. 16, 1887.

Cross-int. 23. In regard to your knowledge of the use of colored fluid compounds on rubber surfaces prior to 1881 you refer to the use of such compounds on rubber belting and hose. For what purposes were such compounds used on rubber belting and hose?

Ans. Mainly for marking the manufacturer's name or the quality in or dimensions of a piece of the goods.

Cross-int. 24. And these marks on such articles were usually made in marking ink, were they not?

Ans. Commonly with some stencilling compound.

Cross-int. 25. You do not know that it was any different stencilling compound than that ordinarily in use for boxes, do you?

Ans. I should think some sort of red paint, perhaps, was used for the purpose.

Cross-int. 26. Did you ever see any other color than red?

Ans. For this purpose I should think red and black were the most common.

Cross-int. 27. Now, as to the use of such compounds on rubber boots and shoes. Were they so applied for the same purpose on them?

Ans. The colored stamp on a rubber boot or shoe simply denotes the width or size of the shoe, and is applied to the bottom of the article.

Cross-int. 28. What was the color of that, usually?

Ans. Red.

Cross-int. 29. Now, how about the marks on water bottles, blankets, and so forth?

Ans. Like the other cases, the marks required to be of a contrasting color—that is, black upon white or white or red upon black.

Cross-int. 30. Now, as to the coloring of rubber balls, dolls, and other toys. Was not the application which was made to them an application of a shiny or lustrous pigment of some considerable thickness?

Ans. I can't say as to the thickness. The colors were commonly bright and clear to make an ornamental appearance, or a nice appearance, for the article. 42

Cross-int. 31. Did you ever notice that these dolls and balls which were thus ornamented with bright and clear colors, as you have stated, were apt to have the applied ornamented surface crack and chip off in use?

Ans. I have seen cases where this was true, and others where the coloring matter was as permanent, apparently, as the parts not colored. The dolls of which I have spoken illustrate the last form or instance of construction.

Cross-int. 32. Referring now to the balls, do you know what pigments and vehicles were used for their ornamentation?

Ans. I do not.

Cross-int. 33. Did you ever examine them sufficiently to ascertain whether they were painted in water color or in some color that resisted the action of water?

Ans. I don't think my attention was ever drawn to the nature of the coloring matter or the vehicle.

Cross-int. 34. Do you know or have you formed any judgment about these balls—whether the ornamental surface was applied before or after curing the rubber?

Ans. No; I have never seen balls which had alternate sections of the surface of contrasting colors in which the coloring matter appeared to be incorporated in the rubber compound and thus applied to or a part of it before vulcanizing.

Cross-int. 35. Such balls as you have last described were made usually in gores or hemispherical section, each gore or hemispherical section being self-colored throughout, were they not?

Ans. As I have seen only the exterior of those balls, I could not say certainly that the coloring matter permeated the entire body, but it had that appearance.

Cross-int. 36. Do you understand that this stencil mark for useful purposes in marking sizes, numbers, or names on belting, hose, boots and shoes, water bottles, blankets, and so forth was applied before or after the curing of the rubber?

Ans. I should say afterwards.

43 Cross-int. 37. None of the stencilled things you have enumerated or the balls, dolls, toys, and other things were of gossamer fabric, were they?

Ans. The blankets were the nearest approach to gossamer.

Cross-int. 38. In this Dunbar and Lothrop patent the article described is hardly such as would naturally be called gossamer goods, is it?

Ans. No; the invention described in that patent is a rubber article, and it is illustrated by showing a heavy piece of floor cloth, but I do not think a satisfactory gossamer fabric could be made in that way.

Direct examination resumed:

Int. 39. Please refer to cross-int. 19 and answer and state what, if anything, there is in the Aldrich patent which assumes that all persons skilled in the art have full knowledge as to the methods and apparatuses necessary or desirable for printing gossamer rubber fabrics after they are cured or for printing such fabrics when they are soft and tacky or for using printing compounds composed in part of rubber, and state also how such assumptions and the absence from the Aldrich patent of directions as to or descriptions of any method or apparatus such as I have above referred to affect your opinion as to whether there is any invention or discovery described in the Aldrich patent.

(Objected to because the witness has shown himself on cross-examination not to be skilled in this art at the time of the Aldrich patent or since, and the question requires him to construe the patent, which is not in his province; also because the question is not opened by the cross-examination.)

Ans. The entire specification of the Aldrich patent assumes, as matter perfectly well known to those to whom it is addressed, that rubber surfaces may be printed upon by any apparatus suitable to print or stamp upon other articles or fabrics. There is no suggestion anywhere in the patent of any difficulty in printing upon rubber, either in the sheet or when applied to woven fabric, and whether that rubber surface be cured or uncured, non-adhesive or soft, sticky or tacky. The description proceeds upon the theory that it 44 is a simple matter and well known in the art to print or stamp upon rubber any ornamentation desired. The description also assumes that it is a perfectly simple matter to print upon the soft, sticky, or tacky surface of an unvulcanized rubber-coated fabric, for which preference is expressed, with an ink or compound containing rubber, for which preference is expressed.

Now, I say that if this matter of printing upon an unvulcanized rubber surface with any suitable printing compound was a matter of no difficulty whatever, then there was no invention in Mr. Aldrich's suggestion to the public to so print upon and ornament a rubber fabric. If, as assumed in the patent, a rubber-coated fabric may be printed in "the printing machine, after the manner of printing calico and similar goods," then there was no invention or discovery in doing it at the date of the Aldrich patent or in the rubber fabric so printed.

Similarly as to the use of a printing compound containing rubber, which was not new as a compound. If that was a suitable compound for printing or stamping by any of the usual forms of printing or stamping apparatus at the date of the Aldrich patent, there was no invention or discovery in the suggestion in the patent which expresses preference for such an ink or compound. If there was no difficulty in the use of such compound for such purpose, which the patent assumes to be the case, then it was open to any person to do this without experiment, and no invention was involved in the suggestion of the patent to do this.

The absence of any description whatever of any new method or apparatus for the purpose of carrying into effect this mode of manufacture is to my mind convincing that no invention or discovery is made known in the Aldrich patent.

(The matter of the answer objected to because the witness has not taken the oath of office as a judge of the circuit court.)

ALBERT H. SPENCER.

Attest: WM. H. COPELAND,
Special Examiner.

45 *Evidence for Complainant in Reply,*

Taken pursuant to the sixty-seventh rule of the Supreme Court of the United States, in equity, as amended, before me, Stephen Thacher, special examiner.

BOSTON, *Feb.* 6, 1888.

Present: Thomas W. Clarke, Esq., of counsel for complainant; James E. Maynadier, Esq., of counsel for defendants.

Deposition of Henry L. Clark.

Direct examination by THOMAS W. CLARKE, Esq., of counsel for complainant:

Int. 1. Please state your name and residence and whether or not you were familiar in the year 1883 with the manufacture of gossamer-rubber fabrics.

Ans. Henry L. Clark; Hudson, Mass.; I had charge of the Hudson Fabric Company at that time, engaged in manufacturing gossamer-rubber goods.

Int. 2. Whether or not, at that time, at the conclusion of the process of coating gossamer-rubber goods in the coating machine, it was customary to roll the goods up on removing them from the machine before the goods were cured.

Ans. Not always. There was a process run onto the cloth to keep it from sticking.

Int. 3. What was that process run onto the cloth to keep it from sticking?

Ans. Sometimes we used paraffine, sometimes vinegar, sometimes alcohol, sometimes carbon.

Int. 4. When these treatments were applied to gossamer-rubber goods after coating in the coating machine, what effect did they produce upon the cloth when it was rolled up?

Ans. Kept it from sticking to the back of the cloth.

46 Int. 5. Was any of the gossamer-rubber cloth made by you at that time subjected to any other subsequent treatment after coating it before the cloth was cured; and, if so, what?

Ans. Sometimes the moire antique cloth was run through the calender before it was put out in the sun; sometimes it was put out in the sun and then calendered afterwards.

Int. 6. What sort of a calender was used to make the moire antique cloth?

Ans. It was a large two-roll calender, figured—one roll, the top roll, figured; the other roll flat, smooth.

Int. 7. What effect upon the cloth did running it through between the plain and figured roll produce upon it?

Ans. It made a figured cloth of it—what we call a moire antique cloth.

Int. 8. Have you seen and examined the Aldrich patent in this case, No. 283,057, dated Aug. 14, 1883?

Ans. I just looked it over. I didn't examine it very closely. I read it over once.

Int. 9. Do you understand the process therein described?

Ans. Yes.

Int. 10. From your experience in the manufacture of gossamer-rubber goods acquired by you before the middle of the year 1883, could you have coated gossamer-rubber goods in a coating machine, removed them from the coating machine, and passed them through a printing machine, and printed them, before curing, successfully, as described in that patent?

Ans. Well, my compound was not exactly like that that I run. I don't know whether I could have done it with that successfully or not. Mine was not exactly like that compound printed in that form there.

Int. 11. Could you have done it with your compound?

Ans. I have done it.

Int. 12. In order to do it successfully what, if anything, was done to the cloth after the rubber surface had been spread in the coating machine?

Ans. It could be taken off on our own machines without putting
anything on it. Our old machines run so slow we could take
47 off the cloth dry, so that it didn't stick. I have taken off
the cloth that way.

Int. 13. Whether or not, if you had been attempting to make rubber cloth according to the instructions of the Aldrich patent, you would, before printing, have put paraffine, vinegar, or other non-adhesive coating upon the cloth before printing, if you were going to roll it up.

Ans. I should.

Cross-examination by JAMES E. MAYNADIER, Esq., of counsel for defendants:

Cross-int. 14. When you put a film of paraffine on, do you do it with the same machine by which the rubber coating was spread upon the cloth? Please explain as to this.

Ans. The same machine, but not the same knife, but one just like it. That's the way I understood the question.

Cross-int. 15. Is the paraffine melted?

Ans. Yes, sir; dissolved in hot naphtha—dissolved or melted.

Cross-int. 16. Please state how the vinegar is applied.

Ans. With a knife, the same as paraffine; it is cider vinegar—cold.

Cross-int. 17. How was the carbon applied?

Ans. With a knife, same as the vinegar. This is bisulphide of carbon.

H. L. CLARK.

Attest: STEPHEN THACHER,
Special Examiner.

Complainant's counsel offers in evidence a printed publication, contained in volume 18, of the specification of English letters patent, in the public library of the city of Boston, being No. 2427 of the specifications of patents of the year 1872, and purporting to be specification of patent of that number, dated Aug. 15, 1872, to John Thorpe, and defendants' counsel consents to the filing of a manuscript copy of the specification and a tracing of the drawing in lieu of the original thereof, but, nevertheless, objects to the introduction of the publication or patent as immaterial, irrelevant, and not 48 in reply, and gives notice that if on examination the publication or patent be found relevant he reserves the right to move the court to take further testimony concerning the same.

Attest: STEPHEN THACHER.,
Special Examiner.

Complainant again rests his case.

Attest: STEPHEN THACHER.
Special Examiner.

49 Exhibits.

Complainant's Exhibits.

Aldrich Patent, No. 283,057.

United States Patent Office.

Frank E. Aldrich, of Boston, Massachusetts.

Rubber Cloth or Fabric.

Specification forming part of Letters Patent No. 283,057, dated August 14, 1883. Application filed June 21, 1883. (Specimens.)

To all whom it may concern:

Be it known that I, Frank E. Aldrich, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful improvement in rubber cloths or fabrics, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same.

My invention relates more especially to means for ornamenting the cloth or fabric; and it consists in a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces provided with useful or ornamental designs or figures printed or stamped thereon with an ink or compound of a different color or shade from the body of the fabric by means of rollers, blocks, or in any other suitable manner, the ink or compound preferably containing rubber, caoutchouc, gutta-percha, or some analogous material, as hereinafter more fully set forth and claimed.

In carrying out my invention I take an ordinary rubber cloth, preferably gossamer rubber cloth, or any fabric composed wholly or in part of rubber, and print or stamp its finished surface or surfaces with an ink or compound of a different color or shade from the body of the goods by means of engraved rollers, blocks, types, dies, or in any other suitable manner. I deem it preferable, however, to use rollers, one or more being employed, according to the number of colors to be applied, and the cloth passed in cuts through the printing-machine after the manner of printing calico and similar goods.

The ink or compound employed in printing the figures or designs on the cloth or fabric is prepared as follows: Take one-half pound of rubber or caoutchouc, four quarts of naphtha, one-half pound of red lead, and one-eighth of an ounce of flowers of sulphur. Dissolve the gum in the naphtha, and then add and thoroughly mix the other ingredients therewith.

I do not confine myself to the exact proportions given, as these may be varied considerably without materially changing the nature of the compound; and, instead of naphtha, some other solvent may be used for the rubber, if desired, although naphtha is deemed preferable; also, instead of the lead, litharge, pigments, shellac, ocher, lamp-black, or any other coloring-matter may be employed, according to the shade or color it is desired to give the ink.

After the cloth or fabric has been printed or stamped as described, it is dried by passing it over heated rollers, or by means of hot air in a properly heated room, or by exposing it to the sun's rays in the open air, the latter being preferable on gossamer or light-weight goods, after which it may be varnished, if desired, although varnish is not generally required when the ink used is compounded according to the foregoing formula.

The object of the sulphur is to render the ink vulcanizable when exposed to heat or to the sun's rays; but, instead of the flowers of sulphur, various other preparations of sulphur may be used for that purpose, if desired, and accomplish substantially the same results.

It will be obvious that the ink or compound described, containing a large proportion of rubber, when applied to the rubber-covered surface of the cloth or to a rubber fabric, will become substantially integral therewith, thus rendering the imprinted figures or designs very durable or permanent, and better adapting the goods for use as carpeting and for purposes where they are subjected to wear than if printed with an ink or compound containing no rubber or analogous material.

I prefer to print or stamp the cloth or fabric while soft, sticky, or "tacky," or before its surfaces are thoroughly dried or vulcanized, as the rubber of the ink and that of the cloth more readily assimilate or become amalga-ted at that period than later, thus rendering the process more effective.

As I propose to make the ink or printing compound described the subject-matter of other letters patent, the same is not herein claimed when in and of itself considered.

It will be obvious that the cloth may be coated or finised and printed on both of its sides, if desired; also, that a fabric composed wholly or in part of rubber may be readily ornamented by printing one or both of its surfaces in substantially the same manner as that described for printing gossamer cloth or a fabric having a fibrous body.

It will also be obvious that the rubber in the ink serves to suspend and hold the lead or other pigment and coloring materials used, and thus render the colors of the figures and designs permanent.

By "useful" figures and designs I refer more especially to numbers and goemetric figures, such as would be imprinted upon the cloth for use in covering chess or checker boards, &c., and by "ornamental" figures and designs, to flowers, plaids, checks, scroll-work, &c., or such as would be imprinted on it for use as carpeting, coverings, draperies, linings, &c., or for manufacturing coats, circular-cloaks, and other articles of wearing-apparel.

Having thus explained my invention, what I claim is—

1. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its

surfaces printed or stamped with useful or ornamental designs or figures in an ink or printing compound of a diffrent color or shade from the body of the cloth or fabric, substantially as set forth.

2. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures in an ink or printing compound of a different color or shade from the body of the cloth or fabric, said ink or compound being composed in part of rubber, caoutchouc, gutta-percha, or some analogous substance, and a coloring material or materials, substantially as specified.

3. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures in an ink or printing compound of a different color or shade from the body of the cloth or fabric, said ink or compound being composed in part of rubber, caoutchouc, gutta-percha, or some analogous substance, and containing sulphur or an ingredient for rendering the ink vulcanizable, substantially as set forth.

4. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures in an ink or printing compound of a different color or shade from the body of the cloth or fabric, and varnished, substantially as specified.

5. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures in an ink or printing compound analogous to the coating of the cloth or body of the fabric and of a different color or shade therefrom, substantially as set forth.

6. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures in an ink or printing compound of a different color or shade from the body of the cloth or fabric, said ink or compound containing rubber and sulphur, or an ingredient for vulcanizing the rubber when subjected to heat or the sun's rays, substantially as specified.

7. As an improved article of manufacture, a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces printed or stamped with useful or ornamental designs or figures in an ink or printing compound of a different color or shade from the body of the cloth or fabric, said ink or compound containing rubber, lead, and sulphur, or means for vulcanizing the rubber when subjected to heat, substantially as set forth.

FRANK E. ALDRICH.

Witnesses:
C. A. SHAW.
L. J. WHITE.

51 *Assignment of Aldrich Patent, No.* 283,057, *Frank E. Aldrich to Wilbur F. Brigham, Trustee.* (*Put in Evidence, Page* 14.)

Whereas I, Frank E. Aldrich, of Newton, county of Middlesex, State of Massachusetts, did obtain letters patent of the United States for an improvement in "rubber cloth or fabric," which letters patent are numbered 283,057 and dated August 14th, 1883; and whereas I am now the sole owner of said patent and of all rights under the same:

Now, therefore, for one dollar and other good and valuable considerations to me in hand paid, receipt of which is hereby acknowledged, I, the said Frank E. Aldrich, do hereby transfer, set over, and assign unto Wilbur F. Brigham, trustee, of Hudson, Massachusetts, and his legal representatives or assigns, the said invention and letters patent and all reissues and extensions of the same which may be hereafter granted:

To have and to hold to the said grantee and his legal representatives or assigns to the full end of the term of the said present or future letters patent.

Witness my hand and seal this twentieth day of December, 1886.

FRANK E. ALDRICH. [L. S.]

Witness:

JOHN W. HOBART.

Received for record Dec. 24, 1886, and recorded in Liber D 36, page 77, of transfers of patents.

In testimony whereof I have caused the seal of the Patent Office to be hereunto affixed.

M. V. MONTGOMERY,
Commissioner of Patents.

[L. S.]

Ex'd: F. C. J.

52 & 53 *John Thorpe's Specification.* (*Put in Evidence, Page* 47.)

English letters patent No. 2427 of 1872.

I, John Thorpe, of Hill Top works, Worsley, in the county of Lancaster, oilcloth manufacturer, do hereby declare the nature of the said invention for "improvements in the mode of and in apparatus or machinery for ornamenting in colors floor, oil, and leather cloths," to be as follows:—

The ordinary method of ornamenting floor, oil, and leather cloths is by means of block printing, and when designs are required formed by continuous stripes of different colors they are produced by the ordinary method in a slow, costly, and imperfect manner.

54 My invention refers to a new method of producing striped ornamental designs by a simple and rapid process giving a most satisfactory result, the whole width of the fabric having the colors forming the complete design applied to it simultaneously if required.

My invention consists in passing the fabric which has been first prepared in the ordinary manner through the ordinary spreading machine or any similar machine, but instead of the ordinary spreading knife I use a knife the lengthway of which passes across the fabric, and is divided into as many sections as there are to be stripes in the design by means of thin metal partitions, these sections being of such width as to correspond with the intended design. Each section is enclosed to form a separate compartment which is open to the surface of the cloth for a short space in front of the edge of the knife. Each compartment is charged with color as required by the design, and as the cloth passes under the spreader the surface receives stripes corresponding to the width and color of each compartment.

In some cases I form striped designs as above described, and then complete them by making additions by ordinary block printing, and by this means I produce designs of highly ornamental character more perfect and varied and at less cost than can be obtained by the ordinary means.

Specification in pursuance of the conditions of the letters patent, filed by the said John Thorpe in the Great Seal Patent Office on the 13th February 1873.

To all to whom these presents shall come, I, John Thorpe, of Hill Top works, Worsley, in the county of Lancaster, oilcloth manufacturer, send greeting:

Whereas her most excellent majesty Queen Victoria, by her letters patent, bearing date the fifteenth day of August, in the year of our Lord one thousand eight hundred and seventy-two, in the thirty-sixth year of her reign, did, for herself, her heirs and suc-

cessors, give and grant unto me, the said John Thorpe, her special license that I, the said John Thorpe, my executors, administrators, and assigns, or such others as I, the said John Thorpe, my execu-
tors, administrators, and assigns, should at any time agree
55 with, and no others, from time to time and at all times there-
after during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel islands, and Isle of Man, an invention for "improvements in the mode of and in apparatus or machinery for ornamenting in colours floor, oil, and leather cloths," upon the condition (amongst others) that I, the said John Thorpe, by an instrument in writing under my hand and seal, should particularly describe and ascertain the nature of the said invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office, within six calendar months next and immediately after the date of the said letters patent.

Now know ye, that I, the said John Thorpe, do hereby declare the nature of my said invention, and in what maner the same is to be performed, to be particularly described and ascertained in and by the following statement, and the accompanying drawings (that is to say):—

The ordinary method of ornamenting floor, oil, and leather cloths is by means of block printing, and when designs are required formed by continuous stripes of different colors, they are produced by the ordinary method in a slow, costly, and imperfect manner.

My invention refers to a new method of producing striped ornamental designs by a simple and rapid process, giving a most satisfactory result, the whole width of the fabric having the colors forming the complete design applied to it simultaneously if required.

My invention consists in passing the fabric which has been first prepared in the ordinary manner through the ordinary spreading machine, or any similar machine, but instead of the ordinary spreading knife I use a knife the lengthway of which passes across the fabric, and is divided into as many sections as there are to be stripes in the design by means of thin metal partitions these sections being of such width as to correspond with the intended design. Each section is enclosed to form a separate compartment which is open to the surface of the cloth for a short space in front of the edge of the knife. Each compartment is charged with color as required by the design, and as the cloth passes under the spreader the surface receives stripes corresponding to the width and color of each compartment.

56 In some cases I form striped designs, as above described,
then complete them by making additions by ordinary block printing, and by this means I produce designs of highly ornamental character, more perfect and varied and at less cost than can be obtained by the ordinary means.

(Here follows diagram marked p. 57.)

Fig. 1 is an end view of the knife and compartments for forming the stripes; Fig. 2 is front view, and Fig. 3 a plan view thereof.

a is the ordinary knife with metal partitions (*b*) soldered upon it, placed at such distances apart as are required by the design; *c* is an open space at the bottom of each compartment in front of the knife to allow the color to pass to the cloth, represented by the lines *d* and supposed to be passing in the direction shown by the arrow.

In Fig. 3 the cloth *d* is supposed to have a design applied to it in black and white, but any required color may be used. The whole width of the cloth has color applied to it at the same time in passing under the knife *a*. The compartments are filled with the required color by spouted vessels, or by funnels, or other means. The cloth to which the design is applied is wider than the design, and the edges are cut off after the design has been applied as in the production of ordinary designs.

I have now particularly described the nature of my invention, and the mode of carrying it into effect and claim as my invention, the system or mode, and means of producing designs on floor, stair, oil, and leather cloths, substantially as herein-before described.

In witness whereof, I, the said John Thorpe, have hereunto set my hand and seal, this twelfth day of February, in the year of our Lord one thousand eight hundred and seventy-three.

JOHN THORPE. [L. S.]

London: Printed by George Edward Eyre and William Spottiswoode, printers to the Queen's most excellent majesty. 1873.

58 & 59 DEFENDANTS' EXHIBITS.

Defendants' Exhibit Brigham Patent. (*Put in Evidence, Page* 20.)

UNITED STATES PATENT OFFICE.

FRANCIS BRIGHAM, WILBUR F. BRIGHAM, and S. MYRON HEWITT, of Hudson, and WILLIAM F. PRUSHA, of Marlborough, Mass.

Water-Proof Fabric.

Specification forming part of Letters Patent No. 226,031, dated March 30, 1880. Application filed March 4, 1880. (No model.)

To all whom it may concern:

Be it known that we, Francis Brigham, Wilbur F. Brigham, and S. Myron Hewitt, of Hudson, and William F. Prusha, of Marlborough, Massachusetts, have invented an improvement in water-proof fabrics, of which the following is a specification.

The object of our invention is to produce a light, thin, water-proof fabric for dress and similar goods ornamented with figures and colors to resemble ordinary dress and similar goods which are not of the water-proof class.

Heretofore light water-proof fabrics have been ornamented and the appearance of a cloth surface preserved in the manner suited for dress and similar goods only by embossing, as shown in our patent No. 209,450, granted October 29, 1878. In that patent, however, the ornamental surface was formed by embossing alone, and gave the fabric embossed figures formed only by impressing on the surface figures resembling that of watered silks and the like. Only such an appearance, or one of the same general character, could be given to the goods by the process described in that patent, and the goods, though figured, could be of only one color.

It is desirable, however, to have dress and similar goods thoroughly water-proof and capable of resisting without injurious effects exposure to any amount of moisture, and yet having an ornamental surface of figures and colors like dress goods heretofore ordinarily worn or used.

Our invention consists of a light, thin fabric, woven or otherwise formed, covered with a waterproofing of rubber composition, or a composition in all respects equivalent thereto, printed with ornamental colors and figures (embossed or plain) to resemble ordinary dress or similar goods.

In carrying out our invention we take thin goods of material and texture suited to the kind of use for which they are intended, and cover them with a coating of a composition the ingredients and proportions of which are as follows: We take as a basis ten pounds of India-rubber in its natural condition and thirty pounds of whiting. For black goods we add to these three pounds of lamp-black. These ingredients are ground together and then dissolved in benzine.

If it be desired to make the ground of the goods white, in place of the lamp-black we add two pounds of zinc-white.

To give a red color to the goods, we use vermilion instead of either of the two named, and for other colors may use other mineral pigments; but in all cases the rubber and whiting constitute the bulk of the mass, though other known equivalents for rubber may be used.

The proportions may be somewhat varied, though we have found those stated to give the best results.

This composition is spread upon the cloth in the manner well known in the art, and forms a basis for receiving the colors and holding them in sharp, clear lines without running or blurring, and so as to make well-defined and ornamental figures. On this prepared surface we print, in colors suited thereto, and by ordinary machinery and means used for such purposes, such figures and shades as may be desired. In addition to this ornamentation, we may also apply the mode of embossing described in our patent heretofore referred to. Whether this embossing be used or not, the product is a desirable imitation of figured goods in ordinary colors, and having what may be called a "cloth surface," as in our former patent heretofore referred to, and all the colors and beauty of appearance of such ordinary dress and similar goods, with the valuable quality, in addition, of capacity to resist or repel moisture.

These goods may be used for cloaks and similar garments, and are especially adapted for such uses as the covers of pianos and the like. They may be printed in any colors and figures adapted to the particular use for which they are intended.

We have contemplated also thus coating and ornamenting paper, which may be thus rendered water-proof and printed with colors and figures, and embossed or not to furnish an article precisely the same in appearance as the ordinary wall-paper, but water-proof and capable of being cleaned without injury.

Having thus described our invention, what we claim as new, and desire to secure by letters patent, is—

A water-proof fabric for dress and other goods having a surface of the described water-proof composition and impressed with figures and colors, as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

FRANCIS BRIGHAM.
WILBUR F. BRIGHAM.
S. MYRON HEWITT.
WILLIAM F. PRUSHA.

Witnesses to signatures of Francis Brigham, Wilbur F. Brigham, and S. Myron Hewitt:

JAMES T. JOSLIN.
WALDO B. BRIGHAM.

Witnesses to signature of William F. Prusha:

L. W. SEELY.
F. L. MIDDLETON.

H. P. DUNBAR & T. C. LOTHROP.

RUBBER ARTICLES.

No. 170,941. Patented Dec. 14, 1875.

Fig. 1.

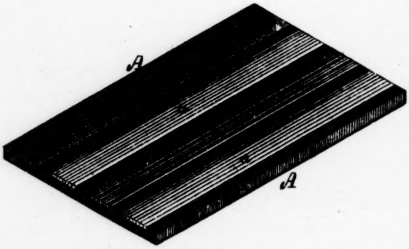

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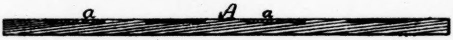
Fig. 2.



Witnesses.
F. Hunnewell
W. E. Boardman

H. P. Dunbar & T. C. Lothrop.
F. Curtis. Atty.

61 DEFENDANTS' EXHIBIT DUNBAR AND LOTHROP PATENT. (Put in Evidence, page 22.)

UNITED STATES PATENT OFFICE.

HIRAM P. DUNBAR and THOMAS C. LOTHROP, of Boston, Mass.

Improvement in Rubber Articles.

Specification forming part of Letters Patent No. 170,941, dated December 14, 1875; application filed November 9, 1875.

To all whom it may concern:

Be it known that we, Hiram P. Dunbar and Thomas C. Lothrop, of Boston, Suffolk county, Massachusetts, have invented an improved manufacture of articles from vulcanized rubber, of which the following is a specification:

This invention relates to the manufacture of floor-cloths, and numerous other articles of a useful and ornamental nature, from vulcanized india-rubber, whereby we are enabled to produce figures or designs varying in extent and character with the use to which they are to be put, and obtain a product which shall withstand a great amount of wear; and the invention consists of a product composed of a base or foundation of cheap compound of rubber, overlaid or inlaid with a series of strips, figures, or characters of a thin and more expensive material, which is capable of receiving any desired color or tint, these strips or figures being, in the final stage of the vulcanizing process, embedded in the foundation, so that a uniformly even surface exists over the whole.

(Here follows diagram marked p. 63.)

The drawings accompanying this specification represent, in figure 1, a perspective view, and Fig. 2 a cross-section, of a piece of floor-cloth or carpeting embodying our invention.

In carrying our invention into practice in the production of floor-cloths, which is one of the many articles we design manufacturing, we provide a base or foundation, A, of a compound of india-rubber and other ingredients, substantially similar to the packing material of commerce now generally in use, which is a comparatively cheap product, containing a small percentage of fine rubber, with the exception that we add to the material of this base a very small percentage of fine rubber, to cause the strips or figures hereinafter alluded to to unite or become incorporated with said base. We further provide a series, *a a*, &c., of comparatively narrow strips or ribbons of a compound containing a much larger percentage of rubber, and incorporate in this compound a substance which shall impart the desired color or tint. These strips are laid in parallel rows upon the top of the base A, in such colors or tints and in such order as may be requisite to obtain the desired effect, and the whole subjected to the action of rollers or other pressure, it being understood that both the base or backing A and the strips *a a*, &c., are in the plastic semi-pulpy condition incident to the manufacture of rubber goods at this stage. The pressure of the rolls causes the ribbons *a a*, &c., to embed themselves in the body of the backing A, so that a uniformly plane surface, common to all, results, and in this condition the whole is subjected to the vulcanizing process.

By this method—that is, the employment of a body of cheap material, not susceptible of being colored, covered in part with a comparatively thin surface of a much finer preparation or compound which is susceptible of receiving and retaining brilliant colors—we are enabled to supply, at comparatively low cost, a very durable and ornamental product, and to make available, and adapt to many uses in the arts, a product which has heretofore been in comparatively small demand, and employed mainly for packing.

To manufacture the entire product from a compound sufficiently fine, or containing the requisite amount of pure rubber, to receive and retain distinct or vivid colors would be impracticable, owing to its high cost.

By our method we obtain all the desirable effects, as regards ornamental appearance and durability, of a fine material, at a cost but little in excess of a cheap material.

We do not confine ourselves to the form, character, or extent of the outer surfacing of fine material which we employ, as this may be varied greatly without departing from the spirit and intent of our invention—as, for instance, in many ornamental objects, figures or characters, in any elaborate designs, may be provided. We have shown, in the present instance, a floor-cloth, as being the representation of one valuable result of our invention.

We claim—

1. The improved process for the manufacture of rubber products, substantially as herein described—that is, the uniting, with a base
or foundation of cheap material, a facing or series of strips
62 or designs of finer material, susceptible of receiving colors
and incorporated with the foundation, substantially as and
for purposes stated.

2. The improved rubber product herein shown and explained, being a floor-cloth composed of a body of cheap material, with a series of parallel strips in colors or neutral tints composed of a finer quality of rubber compound, substantially as and for the purposes stated.

HIRAM P. DUNBAR.
THOMAS C. LOTHROP.

Witnesses:
FRED. CURTIS.
W. E. BOARDMAN.

(No Model.)

T. H. VIDETO.

KNIFE FOR RUBBER COATING MACHINES.

No. 371,155. Patented Oct. 4, 1887.

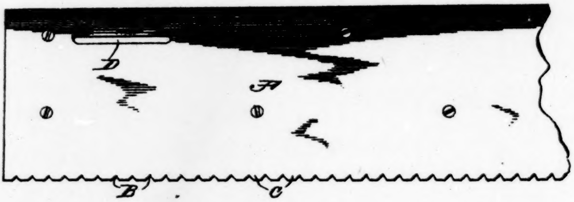


Fig. 1.

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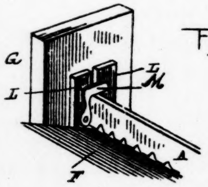


Fig. 3.

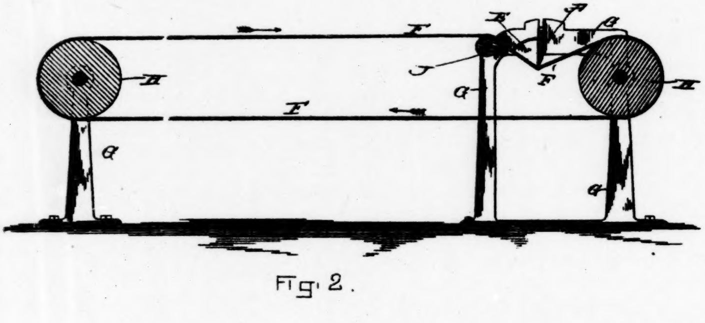


Fig. 2.

WITNESSES:
Ada W. Spencer.
Clinton G. Loomis

INVENTOR.
Theodore H. Videto
by A. H. Spencer
his attorney

64 & 65 *Videto Patent No.* 371,155—*Notched Knife.* (*Referred to Page* 24.)

UNITED STATES PATENT OFFICE.

THEODORE H. VIDETO, of Hyde Park, assignor of one-half to L. Dewart Apsley and Judson H. Coffin, both of Hudson, Massachusetts.

Knife for Rubber-Coating Machines.

Specification forming part of Letters Patent No. 371,155, dated October 4, 1887; application filed August 14, 1886. Serial No. 210,892. (No model.)

To all whom it may concern:

Be it known that I, Theodore H. Videto, of Hyde Park, in the county of Norfolk and State of Massachusetts, have invented a new and useful improvement in knives for rubber-coating machines, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention is primarily an improved knife for use in machines for coating and finishing water-proof fabrics, and its use permits of great simplification in the process of and apparatus for producing such fabrics with surface-stripes.

My invention consists in a knife or bar having a notched blunt-toothed bearing-edge adapted to be held in contact with the coated surface of the moving fabric under treatment and slotted, as at D, for securing the gages.

It also consists in a surface coating or finishing machine provided with a transverse blade or bar having in its bearing-edge a succession of flat blunt teeth with intermediate shallow notches.

My apparatus and process are quite unlike those heretofore employed to produce the so-called embossed or farina-coated gossamers, some of which are ornamented by stripes of the farinaceous material; and my fabric is far superior, as its stripes are more durable and more clearly defined, while with my improvement I simply substitute my notched blade in place of the straight-edged knife by which the foundation coat was spread.

(Here follows diagram marked p. 67.)

In the drawings, figure 1 is a plan of one end of one of my improved knives; and Fig. 2 is a detail of part of a coating-machine, illustrating the practical application of my invention. Fig. 3 is a view in perspective of a portion of one side of the machine, showing the device for holding the knife in position.

A represents the knife or bar, of steel or other firm and durable material; and B, a series of shallow notches formed in the bearing-edge thereof, of such width and at such distance from each other as is desired, leaving a series of blunt teeth, C, to bear frictionally upon the surface of the fabric drawn beneath it.

D is a slot or hole through the bar—one near each end—for the purpose of securing to it the gages E, which prevent the surfacing compound escaping laterally off of the fabric when it is desired to use such gages.

G represents a suitable frame, and H one of the carrying-rollers, by which the fabric F, in the form of an endless belt or otherwise, is supported and moved beneath and in contact with the knife A B C. The knife is fixed in the required position and held fast by suitable mechanical means, so as to act uniformly on the surface.

Fig. 3 illustrates the preferred means of holding the knife in working position, its end being shown as inserted in a groove or recess between two blocks, L, fixed on a post of the frame, while a pivoted hook, M, holds the knife down with its notched edge bearing upon the fabric F. A set-screw may be substituted for the hook with the same result. A bar or a roller, J, extends crosswise beneath the fabric to support it against the pressure of the knife.

The practical operation of my improved apparatus is as follows: After the smooth-coated surface of rubber compound has been applied to the web of fabric, moving through the machine in the usual way, the ordinary straight-edged knife is removed, my notched knife substituted therefor, and the surfacing compound, of suitable material and color, poured upon the coated fabric immediately in front of the knife and between its gages. The fabric web being then set in motion, the surfacing compound will pass freely in stripes through the shallow notches B, but cannot pass except in the thinnest of films beneath the flat blunt ends of the teeth C. When the web has made one complete circuit of the machine, my knife is removed and the striped fabric is treated in the usual manner for removal and curing of gossamer fabrics.

I claim as my invention—

1. The herein-described knife for coating and finishing rubber-coated fabrics, consisting of the blade having a notched blunt-toothed bearing-edge, and gage-slots D, substantially as set forth.

66 2. In a machine for surface-striping water-proof fabrics, the combination of a suitable supporting-frame and carrying-rollers with a transverse stationary bar or knife having on its bearing-edge a succession of flat blunt teeth with intermediate shallow notches, said knife being secured in grooves in the sides of the frame by means of hooks or other suitable fastening devices, so as to bear steadily on the fabric, as set forth.

3. In a machine for surface-striping water-proof fabrics, the stationary bar or knife having on its bearing-edge a succession of flat blunt teeth, with intermediate shallow notches, in combination with the adjustable sides or plates E, whereby the trough or receptacle for the rubber compound is lengthened or shortened, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 7th day of August, A. D. 1886.

THEODORE H. VIDETO.

Witnesses:
A. H. SPENCER.
ELIHU G. LOOMIS.

(Specimens.)

T. H. VIDETO.

WATER PROOF GOSSAMER FABRIC.

No. 375,233. Patented Dec. 20, 1887.

no. 251.
Brigham, Trustee, v. Coffin et al. } p. 71

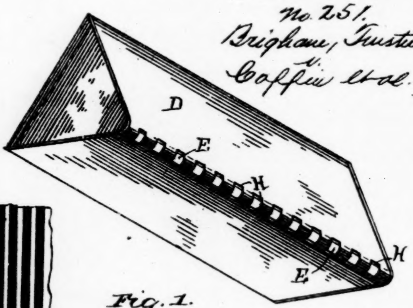
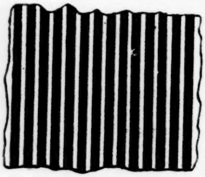


Fig. 1.

Fig. 5.



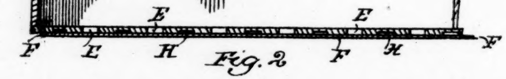


Fig. 2

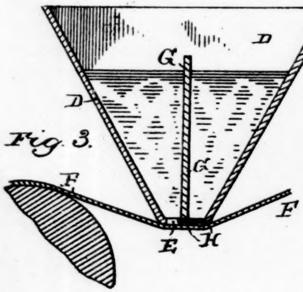


Fig. 3.

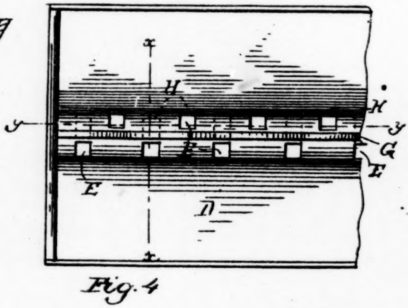


Fig. 4

Witnesses
Thomas Holliday
A. N. Jesuries

Inventor.
Theodore H. Videto

68 & 69 *Videto Patent No.* 375,233—*Fabric.* (*Referred to Page* 24.)

UNITED STATES PATENT OFFICE.

THEODORE H. VIDETO, of Hyde Park, assignor of one-half to L. Dewart Apsley and Judson H. Coffin, both of Hudson, Massachusetts.

Water-Proof Gossamer Fabric.

Specification forming part of Letters Patent No. 375,233, dated December 20, 1887. Application filed October 6, 1886. Serial No. 215,442. (Specimens.)

To all whom it may concern:

Be it known that I, Theodore H. Videto, of Hyde Park, in the county of Norfolk and State of Massachusetts, have invented a new and useful improvement in water-proof fabrics and methods and means of finishing the same, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to improvements in that class of goods known as "gossamer fabrics," the object of which is to produce a fabric which will be light and durable, and at the same time have a highly artistic and finished appearance.

My invention consists of a fabric coated with films of rubber in solution, the finishing-film being composed of rubber in solution, and of a contrasting color with the other films, and laid on the ground or first films to form stripes, the entire surface of the fabric when finished presenting a velvety or dull finished appearance.

In carrying out my invention to produce the article above described I may use a serrated or notched knife, such as is described and claimed in letters patent No. 371,155, granted to me October 4, 1887; but I prefer to use the trough-knife herein shown and described, and which forms the subject of a separate application filed November 6, 1887, serial No. 251,654, the process being also embraced in an application filed by me June 23, 1887, serial No. 242,305.

(Here follows diagram marked p. 71.)

Figure 1 is a perspective view of the trough-shaped knife, showing the perforations and grooves. Figs. 2 and 3 are sections. Fig. 4 is a plan view of my trough-shaped knife with a longitudinal partition. Fig. 5 is a plan view of the fabric.

F indicates the thin fabric to be coated and striped with a rubber compound in solution. The fabric, in the form of an endless belt, is supported by suitable rolls, which distend the fabric and move it longitudinally in the usual way, its upper surface being pressed up against the edge of the knife or blade in order to apply its several successive films of rubber solution, as is now generally practiced in making plain gossamer fabrics. After this foundation of rubber coating or film has been spread evenly onto the fabric and before vulcanizing, the straight-edge knife used for applying these continuous films is removed and the trough-shaped knife shown in the drawings is substituted to form the stripes of rubber.

D indicates my trough-shaped knife mounted in suitable supports and adapted to receive the rubber in solution and deliver the same upon the fabric through the perforations E, formed in the bearing-face of the trough D. The perforations E extend into shallow grooves H the number and width and distance apart of the stripes. Without the grooves the rubber compound in solution will not form the stripes properly, as the cloth, with its foundation-coatings, is sagged by the pressure of the knife upon it, and hugs up so close under the ridge of the trough-knife that it prevents the proper escape of the semi-liquid compound through the perforations; but with the shallow grooves this difficulty is obviated. In the manufacture of my improved fabric I prefer to use this trough-knife rather than the notched knife described in my application, serial No. 210,892, for the reason that stripes of different-colored rubber compounds can be applied simultaneously by means of a partition, G, running through the trough. In this instance the openings E are placed on each side of the partition staggared, as indicated in Fig. 4; or a number of partitions, G, may be otherwise arranged to enable the operator to apply more than two different-colored stripes as the finishing-film of rubber fabric.

The several perforations and grooves may of course be of different widths to form wide and narrow stripes.

I am aware that a fabric having stripes and other designs printed thereon with an ink composed partly of rubber is not new, and that such fabric has a shiny and lustrous appearance.

I am also aware that a fabric having a portion of its surface made lustrous by a starch-finish and ornamented with various figures is not new, and such I do not claim, as my fabric is clearly distinguishable from all others in that it has a velvety dull finish, and that the stripes are composed of a rubber solution.

What I claim is—

The improved gossamer fabric herein described, consisting of a woven fabric coated with films of rubber in solution, the finishing-film forming rubber stripes, and the entire surface being velvety or dull finished as distinguished from a lustrous or a shiny-printed surface.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 9th day of September, A. D. 1886.

THEODORE H. VIDETO.

Witnesses:

A. H. SPENCER.
J. C. KENNEDY.

72 & 73 *Videto Patent No.* 375,234—*Process.* (*Referred to Page* 24.)

UNITED STATES PATENT OFFICE.

THEODORE H. VIDETO, of Hudson, Massachusetts, assignor of one-half to L. Dewart Apsley and Judson H. Coffin, both of same place.

Art of Making Rubber-Striped Water-Proof Fabrics.

Specification forming part of Letters Patent No. 375,234, dated December 20, 1887. Application filed June 23, 1887. Serial No. 242,305. (No specimens.)

To all whom it may concern:

Be it known that I, Theodore H. Videto, of Hudson, in the county of Middlesex and State of Massachusetts, have invented a new and useful improvement in the art of making rubber-striped water-proof fabrics, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of this invention is to produce a rubber-striped water-proof fabric of a more perfect character and having a clearer and more permanent surface than any similar goods heretofore made.

My improvement consists in the succession of steps, hereinafter described, constituting a new and useful process or method of manufacture.

In carrying out my invention a long sheet of the foundation material, ordinarily made into the form of an endless belt, is supported by a pair of rollers which distend and move the fabric longitudinally in the usual way, to apply to it several successive coatings or thin films of rubber compound spread over the exterior surface by the ordinary straight-edged knife, as practiced generally in making plain gossamer fabrics. After the foundation-coating is thus spread, and while it is still fresh, the straight-edged knife is removed, and in its place I substitute a striping apparatus of my invention, which may be either the notch edged knife set forth in my application for patent filed August 14, 1886, serial No. 210,892, or the trough-knife of my application filed October 6, 1886, serial No. 215,442, or any equivalent of such apparatus.

In using my notch-edged knife I extend it across the fabric in place of the straight knife removed, place in front of it upon the fabric a small quantity of the semi-liquid rubber compound of the color desired to contrast with that of the coatings first applied to the material, and then move the fabric longitudinally by revolving its supporting-rollers until the fabric has made one complete circuit, during which movement a limited portion of the striping compound has passed through the notches of the knife-edge and been deposited in parallel lines upon the fresh rubber surface presented to it, while said compound could not pass, except in the thinnest of films, beneath the uncut portions of the knife-edge alternating with the notches, thus producing a rubber-striped surface upon the fabric. With the trough-knife the same result is obtained by substantially the same operation, the only difference being that the striping compound is placed within the trough and a limited portion of it reaches the moving fabric in stripes through perforations and grooves in the bottom of the trough, instead of being placed upon the fabric in front of the knife and passing in stripes through the notches therein. In either case the freshly-coated fabric is drawn beneath and in close contact with the knife, recessed to allow the contrasting compound to be deposited in parallel lines upon its surface, and after one complete circuit through the machine the knife is removed, with any surplus of the compound, so that the remaining steps of the process can be taken.

After removal of the notched or trough knife, I proceed to render the fabric non-adhesive, so that it may be rolled up and vulcanized. To do this I proceed as follows in practice: I replace the straight-edged knife, apply upon the fabric in front thereof a small quantity of dry farinaceous material, preferably corn-starch, and move the fabric longitudinally once through the machine, spreading said material uniformly and smoothly by the knife over the striped surface. I then remove the knife and use a brush, preferably a revolving one, applied to the lowermost portion of the moving belt of fabric, which may pass several times about its supporting-rollers. By this brushing, or some equivalent operation, I remove all or as much of the farinaceous material as can be readily detached mechanically without injuring the fabric. The fabric is then treated with an ordinary solution of paraffine in naphtha, or with an equivalent thereof, applied upon the striped surface in front of the replaced straight-edged
knife, and the fabric moved again through the machine be-
74 neath said knife. This operation cleans and freshens the
surface of the fabric and, in connection with the farina treatment, renders it non-adhesive, so that it may be rolled up and removed for such further curing or vulcanization as the rubber may require.

Some method of vulcanization is necessary to prevent the rubber surface from ultimately softening to an objectionable degree under heat or pressure. I am therefore accustomed, as a final step, to expose the fabric, in the ordinary way, to solar or artificial heat for such length of time and under such conditions as will cure the rubber thereon.

I claim as my invention—

The described improvement in the art of making rubber-striped water-proof fabrics, the same consisting in coating the web with successive films of rubber compound, applying to such coated surface while fresh stripes of like compound of a contrasting color, coating the striped surface with dry farinaceous material spread uniformly thereon, brushing such material away to expose said surface, cleaning such surface by a solution of paraffine in naphtha, and vulcanizing the rubber thereon, for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 18th day of June, A. D. 1887. THEO. H. VIDETO.

Witnesses:
A. H. SPENCER.
J. C. KENNEDY.

(No Model.)

T. H. VIDETO.

KNIFE FOR FINISHING WATER PROOF FABRICS.

No. 375,305. Patented Dec. 20, 1887.

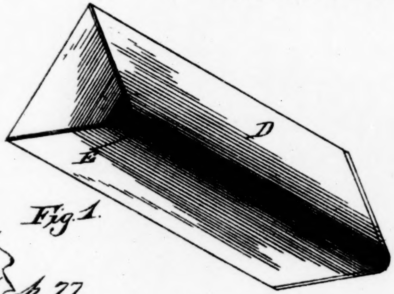


Fig. 1.

No. 251.
Brigham, Trustee
v.
Coffin et al } p. 77.

Fig. 2.

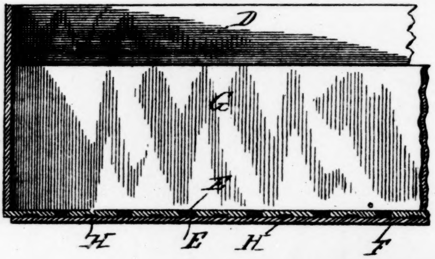
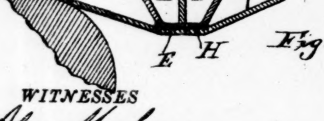


Fig. 3.



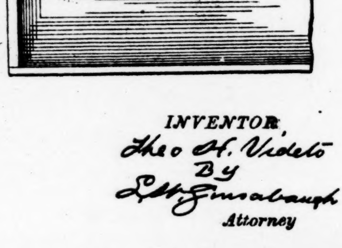


Fig. 4.

WITNESSES
Alex Mahon
E. W. A. Phillips

INVENTOR
Theo H. Videto
By
L. W. Sinsabaugh
Attorney

75 *Videto Patent No.* 375,305—*Trough Knife.* (*Referred to Page* 24.)

UNITED STATES PATENT OFFICE.

THEODORE H. VIDETO, of Hudson, Massachusetts, assignor of one-half to L. Dewart Apsley and Judson H. Coffin, both of same place.

Knife for Finishing Water-Proof Fabrics.

Specification forming part of Letters Patent No. 375,305, dated December 20, 1887.

Original application filed October 6, 1886. Serial No. 215,442. Divided and this application filed October 6, 1887. Serial No. 251,654. (No model.)

To all whom it may concern:

Be it known that I, Theodore H. Videto, of Hudson, in the county of Middlesex and State of Massachusetts, have invented certain new and useful improvements in a knife for finishing water-proof fabrics, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention is a subdivision of my application, serial No. 215,442, filed October 6, 1886, for patent on "knife for finishing water-proof fabrics." This division of said case embraces the means therein set forth for striping the surface of such fabrics, while the other division has for its subject-matter the improved fabric striped by such means or by the notched knife set forth in my application No. 210,892, filed August 14, 1886.

The main feature of novelty of my present invention consists in a trough-shaped vessel, technically termed a "knife," having at its lower angle or bearing-face a series of perforations, each perforation entering a groove running across the knife.

An additional feature of the invention consists in such trough-knife provided with one or more partitions.

By these improvements the semi-liquid compound placed in the trough may be deposited upon the contrastingly-coated surface of the fabric drawn beneath it and form stripes of two or more colors.

In the drawings—

(Here follows diagram marked p. 77.)

Figure 1 is a perspective view of the trough-shaped knife, showing the perforations and grooves. Figs. 2 and 3 are sections of the same. Fig. 4 is a plan of my trough-shaped knife with a longitudinal partition.

Heretofore in the manufacture of gossamer fabrics the rubber coating has been applied uniformly over the surface of the textile material by the well-known knife-coating machine, consisting, essentially, of a pair of rollers which support and distend the fabric and cause it to move longitudinally under and in contact with a straight-edged metal blade bearing across the width of the fabric, so as to spread the rubber compound evenly over its surface in a succession of extremely thin continuous films. I employ this apparatus and proceed in this manner to apply to the fabric all the coatings except the last; but the finishing-film I apply in stripes upon the surface so prepared, as will now be described.

F indicates the thin textile fabric, coated on one side, as described, and to be striped with a rubber compound in solution. The fabric is in the form of an endless belt and is supported and moved by the rollers, as stated, both in applying the successive foundation-films and the finishing-stripes. After the foundation rubber coatings are spread evenly, and before vulcanizing, the straight-edge knife is removed and my trough-shaped knife is substituted to form the stripes of rubber compound in solution.

D indicates my trough-shaped knife mounted and held firmly in suitable supports and adapted to receive the semi-liquid rubber compound and deliver the same in stripes upon the fabric through the perforations E, formed in the bearing face or edge of the trough. These perforations extend into shallow grooves H, running transversely across the lower edge of the trough. The number and width and distance apart of the grooves determine the number and width and distance apart of the stripes. The edge walls of the grooves are well defined, so as to deliver the compound smoothly in stripes having a finished appearance.

Without the grooves the rubber compound in solution will not form the stripes properly, as the cloth with its foundation-coatings is sagged by the pressure of the knife upon it and hugs up so close under the edge of the trough-knife as to prevent the proper escape of the compound through the perforations; but with the shallow grooves H this difficulty is obviated. The several perforations and grooves may of course be of different widths to form wide and narrow stripes.

G is a partition, represented as running longitudinally along the center of the trough D and affixed or fitting snugly to its inner bottom surface, to permit the placing of two different striping compounds therein, one on each side of the partition. The perforations
E are shown in Fig. 4 as placed on each side of the partition
76 alternately, with an unperforated space between them. With
this plan the fabric produced will have in its stripes three different colors or shades, one being that of the last foundation-coating; but partitions may be otherwise arranged to enable the operator to apply more than two different-colored stripes as the finishing-film of rubber compound.

The trough-knife will be held firmly in the frame by suitable means, with its lower angle bearing on the fabric during one complete movement of the endless belt longitudinally through the machine, after which the fabric is treated in the usual way for such curing as may be required.

I claim as my invention—

1. In a knife coating-machine, the trough-knife D, with perfora-

tions in its lower edge, and shallow grooves extending from said perforations at right angles to the length of the trough-knife, substantially as and for the purpose specified.

2. In a knife coating-machine, the trough-knife D, with perforations and grooves, as described, and one or more partitions separating it into separate chambers, substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 4th day of October, A. D. 1887.

THEO. H. VIDETO.

Witnesses:
A. H. SPENCER.
ELIHU G. LOOMIS.

78 & 79 The following is the opinion of the circuit court in accordance with which the decree was entered February 15, 1889, dismissing the bill of complaint in this cause:

Circuit Court of the United States, District of Massachusetts. In Equity.

WILBUR F. BRIGHAM, Trustee,
v.
JUDSON H. COFFIN *et al.*
No. 2383.

Opinion of the Court. (*February* 15, 1889.)

COLT, *J.*:

The patent in suit is No. 283,057, dated August 14, 1883, and granted to Frank E. Aldrich for an improvement in rubber cloths or fabrics.

The specification states: "My invention relates more especially to means for ornamenting the cloth or fabric, and it consists in a rubber cloth or fabric composed wholly or in part of rubber, having one or both of its surfaces provided with useful or ornamental designs or figures printed or stamped thereon with an ink or compound of a different color or shade from the body of the fabric by means of rollers, blocks, or in any other suitable manner, the ink or compound preferably containing rubber, caoutchouc, gutta-percha, or some analogous material, as hereinafter more fully set forth and claimed.

In carrying out my invention I take an ordinary rubber cloth, preferably gossamer rubber cloth, or any fabric composed wholly or in part of rubber, and print or stamp its finished surface or surfaces with an ink or compound of a different color or shade from the 80 body of the goods by means of engraved rollers, blocks, types, dies, or in any other suitable manner. I deem it preferable, however, to use rollers, one or more being employed, according to the number of colors to be applied, and the cloth passed in cuts through the printing machine after the manner of printing calico and similar goods."

The prior Dunbar & Lothrop patent of December 14, 1875, exhibits a rubber-cloth, having on its surface ornamental designs or figures. The patent issued to Brigham and others March 30, 1880, was for an improvement in water-proof fabrics, and the specification states that the invention consists of a light, thin, woven fabric, covered with a water-proofing of rubber composition, printed with ornamental colors and figures to resemble ordinary dress or similar goods. The composition is spread upon the cloth in the manner well known in the art and forms a basis for receiving the colors and holding them in sharp, clear lines without running or blurring, so as to make well-defined and ornamental figures. On this prepared surface there is printed in colors suited thereto such figures and shades as may be desired.

From these two patents it is manifest that the printing of ornamental designs upon rubber cloth was old at the date of the Aldrich invention. If the patent can be sustained it must be on the ground that Aldrich was the first to print or stamp rubber cloth with an ink or compound containing rubber, gutta-percha, or some analogous material. In his specification he states that he does not claim the ink or printing compound, as he proposes to make it the subject-matter of another patent. Bearing in mind the prior state of the art, I do not think this patent can be sustained.

The claims of the patent are not for an improved mechanism, but
for an improved article of manufacture, which consists in
81 & 82 printing ornamental figures upon a rubber fabric with a
colored ink composed in part of rubber. Rubber cloth
had previously been ornamented by printing upon it with one kind
of ink, and in my opinion it cannot be said to constitute invention
to print upon it with another kind of ink.

The bill should be dismissed.

Bill dismissed.

83 *Clerk's Certificate.*

UNITED STATES OF AMERICA, } *ss:*
Massachusetts District, }

I, John G. Stetson, clerk of the circuit court of the United States within and for the first circuit and district of Massachusetts, certify that the foregoing is a true copy of the record of said circuit court in the cause in equity entitled No. 2383, Wilbur F. Brigham, trustee, complainant, *v.* Judson H. Coffin *et al.*, defendants, lately determined in said circuit court, and of all proceedings therein and of the opinion of the court filed therein.

In testimony whereof I hereunto set my hand and affix the seal
of said circuit court, at Boston, in said
Seal of the Circuit Court, district, this second day of October, in
Massachusetts. the year of our Lord one thousand eight
hundred and eighty-nine, and of the
Independence of the United States the one hundred and fourteenth.

JOHN G. [illegible]TSON, *Clerk.*

84 *Bond to Party on Appeal.*

Know all men by these presents that we, Wilbur F. Brigham, trustee, of Hudson, in the State of Massachusetts, as principal, and Rufus H. Brigham, of said Hudson, as surety, are held and firmly bound unto Judson H. Coffin and L. Dewart Apsley, both of said Hudson, in the full and just sum of one thousand dollars, to be paid to the said Judson H. Coffin and L. Dewart Apsley, their certain attorney, executors, administrators, or assigns; to which payment, well and truly to be made, we bind ourselves, our heirs, executors, and administrators, jointly and severally, by these presents.

Sealed with our seals and dated this 30th day of March, in the year of our Lord one thousand eight hundred and eighty-nine.

Whereas lately, at a circuit court of the United States within and for the district of Massachusetts, in a suit in equity depending in said court between said Wilbur F. Brigham, trustee, complainant, and said Judson H. Coffin and L. Dewart Apsley, defendants, decree was rendered against the said complainant, and the said complainant having obtained an appeal to remove the said cause to the Supreme Court of the United States to reverse the decree in the aforesaid suit, and a citation directed to the said defendants, citing and admonishing them to be and appear at a Supreme Court of the United States to be holden at Washington on the second Monday of October next:

Now, the condition of the above obligation is such that if the said complainant shall prosecute his said appeal to effect and answer all damages and costs if he fail to make his plea good, then the above obligation to be null and void; otherwise to remain in full force and virtue.

WILBUR F. BRIGHAM, *Trustee.* [L. S.]
RUFUS H. BRIGHAM. [L. S.]

Signed, sealed, and delivered in presence of—

—— ——.

Approved.
THOS. L. NELSON,
District Judge.

A true copy of the bond taken by the judge at the time of allowing the appeal named in said bond, which bond is on file in the office of the clerk of the circuit court of the United States for the first circuit and district of Massachusetts.

Attest: JOHN G. STETSON,
Clerk U. S. C. C., Mass. Dist.

Endorsed on cover: Case No. 13,863. Massachusetts C. C. U. S. No. 251. Wilbur F. Brigham, trustee, appellant, *vs.* Judson H. Coffin and L. Dewart Apsley. Filed October 21, 1889.

149 U S 557

Office Supreme Court U. S.
FILED.
FEB 13 1893
JAMES H. McKENNEY,
CLERK.

SUPREME COURT OF THE UNITED STATES,

October Term, 1892.

No. 251.

WILBUR F. BRIGHAM, Trustee,
Appellant,

v.

JUDSON H. COFFIN AND L. DEWART APSLEY,
Appellees.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MASSACHUSETTS.

THOS: WM: CLARKE,
of Counsel for Appellant.

Supreme Court of the United States,

OCTOBER TERM, 1892.

No. 251.

WILBUR F. BRIGHAM, TRUSTEE,
APPELLANT,
v.
JUDSON H. COFFIN AND L. DEWART APSLEY,
APPELLEES.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MASSACHUSETTS.

STATEMENT.

This was a bill in equity, filed April 15, 1887, by Wilbur F. Brigham against Judson H. Coffin and L. Dewart Apsley, all of them of Hudson in the state of Massachusetts.

It charges infringement of the Aldrich patent of August 14, 1883, No. 283,057, the property of the complainant.

The answer requires proof of the assignment to the complainant, page 2, paragraph 1. The assignment was dated December 20, 1886, and is printed on page 39.

The answer denied infringement, and denied on information and belief that Aldrich was the original and first inventor or discoverer of any material and substantial part of the things patented in the patent in suit, and gave notice that defendants relied, on this issue of novelty, upon the Brigham, Hewitt, and Prusha patent, 226,031, of March 30, 1880, and on the Dunbar and Lothrop patent of March 14, 1875, No. 170,941.

The answer also denied that the complainants' patent in suit described anything of any value or importance in the art; averred that all that was described was worthless, and denied that the alleged invention of Aldrich was any advance in the art; and also denied that rubber fabrics had ever been practically manufactured as described, and averred that the Aldrich patent in suit was null and void.

It further denied (page 3) that defendants had made, used, or sold any of the patented fabric or had threatened to use it.

It admitted that defendants had made and sold rubber fabrics consisting of a woven cloth with a thin coating of rubber of one color, ornamented by stripes of rubber coating of a different color, and claimed they have a right to do this; and denied that the rubber cloth or fabric so made was the same thing as the patented fabric; and also denied that there was any invention or discovery described in the patent which was used, practised, or embodied in said fabrics made by these defendants or in any machine made or used by them in the manufacture of their fabric.

DEFENCE SUMMARIZED.

In other words, the defendants made the contention that the Aldrich patent in suit described a thing that was of no value, and hence not patentable; and also described a thing which was impractical to do, and hence was not patentable; and also described a thing which had been done before and was described in the Brigham, Hewitt, and Prusha patent and in the Dunbar and Lothrop patent, and hence could not be patented again; and on these grounds they contest the right of the complainant to recover. They also contend that, if the patent be valid, the way in which they make their fabric is a different way from that which the plaintiff's patent describes and claims, and so not an infringement.

OPINION OF THE COURT, AND ERRORS THEREIN.

The court, in an opinion printed on page 55 of the record, found that the printing of ornamental designs on rubber cloth was old at the date of the Aldrich invention (p. 56). "If the patent can be sustained, it must be on the ground that Aldrich was the first to print or stamp rubber cloth with an ink or compound containing rubber, caoutchouc, gutta-percha, or some analogous material;" and then goes on to say that because he does not claim the ink or printing compound the patent cannot be sustained. The reason which follows is this:

"The claims of the patent are for an improved article of manufacture which consists in printing ornamental figures upon a rubber fabric with a colored ink composed in part of rubber. Rubber cloth had previously been ornamented by printing upon it with one kind of ink, and, in my opinion, it cannot be said to constitute invention to print upon it with another kind of ink."

ERROR ASSIGNED.

The error of the court consists in the statement of what the invention was. The invention was not claimed to be an invention which "consists in printing, &c.," but an "improved article of manufacture, which was a rubber cloth or fabric, composed wholly or in part of rubber, and having one or both of its surfaces printed or stamped with useful or ornamental designs or figures in an ink or printing compound of a different color or shade from the body of the cloth or fabric, said ink or compound being composed in part of rubber, caoutchouc, gutta-percha, or some analogous substance, and a coloring matter;" which was in terms the second claim.

The third claim added sulphur as an ingredient of the ink, to make it vulcanizable; the fourth claim did not in terms require the ink or printing compound to contain rubber, but did require the cloth to be varnished; the fifth claim required the useful or ornamental designs in an ink or compound *analogous to the coating of the cloth and of a different color or shade;* the sixth claim requires the ink or compound to contain rubber or other vulcanizable ingredients, and the seventh claim required the ink or compound to contain rubber, lead, and sulphur. No claim omitted rubber as an ingredient of the ink except it had the words "substantially as described," which included it.

Some claims may be construed as duplicates, but none as void.

The invention, therefore, of Aldrich, as stated in the claims, was to make a cloth the surface of which was of two layers, one a complete or ground layer, of one color, the other an incomplete or partial layer overlaying the ground layer of another color, both layers consisting of vulcanizable india-rubber compounds, and the partial layer being applied in useful or ornamental designs or patterns.

The court below should have found that the Aldrich patent described an invention of merit which could be practised, and was practised, and which was new and useful.

As the court did not proceed to the question of infringement, that question must be treated separately, but no finding of the court on this point can be assigned as error, because there was none.

Argument.

The court relied upon two patents as showing the anticipatory state of the art; the first of these was the Dunbar and Lothrop patent of December 14, 1875. This is in the record at page 45, and is for a vulcanized india-rubber floor cloth. The invention is stated to consist of a product composed of a base or foundation of cheap compound or rubber overlaid or inlaid with a series of strips, figures, or characters of a thin and more expensive material, which is capable of receiving any desired color or tint; these strips or figures being, in the final stage of the vulcanizing process, embedded in the foundation, so that a uniformly even surface exists over the whole.

One difference between the product described by Dunbar and Lathrop and the product described by Aldrich is that the Aldrich patent describes an ordinary rubber cloth (p. 36), preferably gossamer; and to carry out the invention, the manufacturer is to print or stamp the finished surface or surfaces with an ink or compound of a different color or shade from the body of the goods by means of rollers, blocks, types, dies, or other suitable manner.

This ink or compound is to contain india-rubber, naphtha, vulcanizing ingredients, and coloring matter.

The patterns are necessarily printed upon the surface, and adhere to the surface of the cloth, and will project above the surface of the cloth, and thus there will not be an uniformly even surface over all.

Although the product of the Dunbar and Lothrop patent is called floor cloth, it is described as consisting of two parts, a base or foundation of a compound of india-rubber and other ingredients substantially similar to the packing of commerce, now generally in use, which is a comparatively cheap product containing a small percentage of fine rubber, — and a series of comparatively narrow strips which are to be veneered side side by upon this coarse base. The whole surface of this Dunbar and Lothrop product is homogeneous and even, and the patterns that are made are what are technically known as inlaid patterns, while the patterns made by Aldrich are overlaid patterns.

The Dunbar and Lothrop structure or product is a mosaic, a piece of marquetry or inlaid work, while the Aldrich product is analogous to *appliqué* work or overlays.

Again, it appears from the Dunbar and Lothrop patent that this body of cheap material was not susceptible of being colored, and that it was comparatively thick, and that colored floor cloth is not known to have had any cloth in it at all.

Clearly, the court did not rely much on this patent when writing the opinion; for it says, "From these two patents it is manifest that the printing of ornamental designs upon rubber cloth was old at the date of the Aldrich patent."

The Dunbar and Lothrop patent does not lead to any such conclusion.

The other patent referred to in the opinion of the court and cited in the answer is the patent to Brigham and others of March 30, 1850. This patent is printed on page 43. The invention was designed to produce a light, thin, waterproof fabric for dress and similar goods, ornamented with figures and colors to resemble ordinary dress and similar goods not of the waterproof class.

The patent recites that an ornamental surface in imitation of a cloth surface had been made by embossing, and a resemblance to watered silks produced. These ornamental surfaces were necessarily in monochrome, or of single tints, sometimes called self-colored. The patentees proposed to print on the rubber surface of thin rubber cloth ornamental colors or figures to resemble ordinary dress or similar goods. They described the coating compound, which did not contain sulphur, and the method of coloring it, and said that the composition was to be spread upon the cloth in the manner well known in the art. Being dissolved rubber, it could only be applied with the knife, as described by Videto (p. 13, int. 3).

The Brigham patent states that on this prepared surface we print in colors suited thereto, and by *ordinary* machinery and means used for such purposes, such figures and shades as may be desired. It was to be a waterproof fabric printed with colors and figures by *ordinary* machinery and means other than machinery; that is to say, ink or printing compound. The ordinary ink or printing compound in use before 1883 did not contain india-rubber solution as a vehicle (Sharples, p. 7, int. 7).

Videto, p. 15, int. 11, says that the Brigham patent contains no novelty, no invention or discovery; nor (int. 12) does he think the Aldrich patent contains discovery or invention, *except that there may be novelty or invention in printing in ink composed of india-rubber and other ingredients;* but he thinks that is no invention, because rubber compounds used as printing inks on gossamer frabric are impracticable because of their viscidity. This last statement is, however, incorrect.

No previous knowledge except by the owners of these two patents is set up in the answer; nor does

Videto claim that any rubber ink had ever been used for printing on india-rubber surfaces.

Spencer said (int. 5, p. 26) a rubber surface had been marked or ornamented before 1881 by various colored compounds applied in fluid state by stamps or brushes, as in painting or in stencilling had been used. They had been applied on rubber belting and hose, and on boots and shoes, and for the marking of numbers and sizes or names, as well as in coloring of rubber balls and other toys. This, as appears on page 30, cross-int. 23, "was mainly for marking the manufacturer's name or the quality or dimensions of a piece of goods." Cross-int. 24, "with some stencilling compound." Cross-int. 25, "some sort of red paint, perhaps." Cross-int. 26, "or red and black." Cross-int. 27, "and they were used for marking the size of shoes." Cross-int. 29, "and for various marks on water bottles," &c.

Cross-int. 33. He did not know whether they were painted in water color or in waterproof color. And the stencilled mark (p. 31, cross-int. 36) was applied after the curing of the rubber. He says (cross-int. 38) that a satisfactory gossamer fabric could not be made in the way described by Dunbar and Lothrop.

Although he had spoken of balls (p. 27) as anticipating Aldrich, he had never seen balls which had alternate sections of the surface of contrasting colors in which the coloring matter appeared to be incorporated in the rubber compound and applied to it before vulcanizing. He thought the parti-colored balls had coloring matter throughout the body (cross-int. 35), but had never cut one open; and (cross-int. 32) he did not know what pigments or vehicles were used for their ornamentation.

A practical rubber manufacturer, Henry L. Clark of Hudson, who had charge of the Hudson Fabric Company in 1883, engaged in the manufacture of rubber gossamer goods, disposed of the proposition that there was difficulty in so working gossamer rubber cloth that it could be rolled up and transported for printing from one place to another, by saying, page 33, at the conclusion of the coating there was a process run on to the cloth to keep it from sticking. Sometimes they used paraffine, sometimes vinegar, sometimes alcohol, and sometimes carbon (cross-int. 3), which carbon, it subsequently appears (cross-int. 17), was bisulphide of carbon applied with a knife.

All these processes were applications of fluids scraped on with a knife. If the machine ran slow

(p. 34, int. 12), the cloth would dry, so that it did not stand up; and if attempting to make rubber cloth according to the instructions of the Aldrich patent, he would have put the paraffine, vinegar, or other non-adhesive coating upon the cloth if he were going to roll it up (int. 13, p. 34).

The Brigham patent does not suggest the necessity of having the overlay of a character of a body of a homogeneous nature to the body to which the overlay was applied, but prescribed the use of ordinary machinery and means. This required the use of linseed oil, and turpentine if printer's ink was used, or if calico, printer's ink or pigment was used instead of water color mixtures — made to adhere to the cloth by subsequent treatment, in which the fibre of the cloth played an important part; that is, the calico printer employed aqueous solutions and mixtures of coloring matters and mordants.

It is obvious that water colors would be of no use on a waterproof fabric, or colors to be fixed on vegetable or animal fibres by mordants would be of no use without mordants or on rubber.

THE SUMMARY OF THE ARGUMENT ON THE ERROR OF THE COURT BELOW IN DECLARING THAT

THE ALDRICH PATENT SHOWED NO INVENTION IS THIS:

As early as March, 1880, it was considered desirable to produce a light, thin, waterproof fabric for dress and similar goods, ornamented with figures and colored to resemble ordinary dress and similar goods not of the waterproof class, and Brigham, Hewitt, and Prusha endeavored to produce such a fabric, and applied for a patent for the same, which patent is in evidence.

The fabric employed by them was to be made out of textile goods coated with dissolved india-rubber mixed with coloring materials mentioned in the patent, — with lampblack added for black goods, zinc-white added for white goods, and vermilion added for red goods, and other mineral pigments for other colors, all, including the rubber, to be dissolved in benzine and spread upon the cloth in a manner well known in the art, — that is to say, scraped on with a knife machine. On this prepared surface was printed, *by ordinary machinery and means*, such figures and shades as were desired.

A specimen of this work was produced by Mr. Videto (*Exhibit Videto-Brigham sample put in evidence*, *p. 14*, *int. 4*).

This attempt on the part of Brigham, Hewitt, and Prusha proved a failure, and was abandoned. Inspection of the fabric produced shows that the ornamental pattern has sunk into the cloth and corroded it. The reason of this injury is stated by Sharples, that printer's ink contains linseed oil and turpentine, neither of which should be allowed to come into contact with the surface of rubber cloth. And it is probably familiar knowledge to the court and each member of it, that oil rots vulcanized rubber, which accounts for the destruction of the rubber blocks used behind the shafts of carriages to keep them from rattling, and commonly known as barnets; and also for the softening and destruction of rubber car springs, which have gone almost entirely out of use.

It was then in 1880 and 1881 desirable to have an ornamental, thin, rubber fabric of contrasting colors, one of the colors being a figure upon the surface of the other, and it was desirable that this should be made so as not to injure the texture of the rubber surface of the cloth, and the first attempt at making such a fabric was a failure and was abandoned.

Later, Aldrich, the patentee in this case, gave his attention to producing the rubber cloth composed wholly or in part of rubber, and having one or both of its surfaces provided with useful or ornamental characters or figures printed or stamped thereon, with an ink or compound of a different color or shade from the body of the fabric. In other words, Aldrich proposed to make a commercial article which the patentees of the Brigham, Hewitt, and Prusha had had in contemplation, but had failed to make commercial and practical.

He told in his patent, pages 36 to 38, how to do this. He put it into practice, making goods which were merchantable and were marketed, and there were a considerable quantity of them, and they were pretty generally sold.

Aldrich mentions the firm of Jordan, Marsh & Company to whom he sold some (p. 11, int. 5). Videto mentions seeing a garment made under the Aldrich patent (p. 15, int. 9), which was in the possession of a house in Buffalo, N.Y. (p. 22, cross-int. 63). Aldrich says that he ran the goods on the market from a year to a year and a half (p. 11, int. 6), and the quality was satisfactory (int. 7), and produced a great number of samples, and says he had other patterns and designs. Samples made as early as 1884 were in good condition in 1887.

The reason why Aldrich gave up the business — he is now in the mill-supply business (p. 10, int. 1) — was that he went out of it in 1884 (p. 11. int. 3) because the business was demoralized. Orders began to drop off in the fall of 1882, and in the spring of 1883 prices were cut, and from that it was a dropping-off time (p. 11, int. 12).

We have here a demand, an attempt to supply it, a failure, a continuance of the demand, another attempt to supply it, and the production of merchantable goods, in variety, to supply the demand.

This gives all the necessary elements to sustain the proposition of invention.

It is not pretended that the exact thing described by Aldrich was ever before produced.

It is said by Videto it could not be produced, but the answer to that is that it was.

It is also said that something needed to be done which was not explained by Aldrich in order to make the work a success. But while Videto (p. 16, int. 17) says that it was not practical to make the goods as Aldrich described, and while Spenser (p. 25, int. 35) thinks there would be serious difficulty, and that the Aldrich patent fails to instruct the public how to carry out the printing or stamping, and that the patent would be void, and (p. 32) argues that if it is simple and easy to print in contrasting colors on the articles, there was no invention in Mr. Aldrich's suggestion, and no difficulty and no new method of apparatus, there was no invention or discovery; Mr. Clark, the expert, disposes of all the trouble that has been made about this difficulty, by showing that before gossamer rubber goods were rolled up, if not cured, the rubber was covered over or washed with paraffine, or vinegar, or alcohol, or bisulphide of carbon, which prevented the cloth from sticking, and that if he had been attempting to make rubber cloth according to the instruction of Aldrich's patent, one of these non-adhesive coatings would be put upon the cloth before printing, that being the usual way to treat the cloth just before removing it from the coating machine when carrying it off to be cured.

Aldrich, therefore, addressing people skilled in the art, gave sufficient information to enable them to ornament gossamer fabric, which they already knew how to make and roll up and carry off, and unroll and cure.

It is unquestionable that at this time, when the Aldrich patent was taken, this rubber cloth having an ornamental figure upon its surface in contrasting colors to the ground coating of the cloth, the material of which figures was of homogeneous quality with the ground surface of the cloth, and which figure was printed or applied to the fabric over the ground surface or original coating, and cured with the ground surface, was a new article of commerce, and, being a new article of commerce, and filling a void in the art which it was desirable to fill, which had been attempted, but which had not previously been filled, something more than the mere knowledge of a workman was required to reach the result.

Videto, the accomplished workman, said, in spite of the fact that Aldrich not only had done it, but had produced the specimens of what he had done,— Videto said that the work could not be done. He said in 1887, after he had been seven years in the manufacture of gossamer fabric (p. 16, int. 17), "I do not see how a rubber compound could be used on a roller except in a thin semi-fluid state, and this could not be transferred or impressed upon the cloth with a smooth surface, because of the tacky or sticky nature of the rubber. The pressure of the ink roller would of necessity mar the surface and leave it rough and uneven. I have tried on many occasions to do this, and know it cannot be done. But," he says (p. 15, int. 12), "there may be some invention in printing with an ink composed of rubber and other ingredients, but I very much doubt it, for the reason that rubber compounds used as printer's ink on gossamer fabrics are impracticable because of their viscidity." All this is mere theory. Aldrich did the work.

Neither Videto nor Spencer ever tried to take the rubber cloth coated in the usual way and prepared for rolling up before curing with the paraffine or other treatment run on to it to prevent its sticking, and then print it with the ink prescribed by Aldrich, and they did not pretend to have done so. They simply do not think it would work.

It is evident, then, that something new in the art had been produced. The machinery by which it is produced is not new. The medium or vehicle by which the *appliqué* patterns are applied is not new. The only thing that is new is the result, which is a cloth having *appliqué* patterns on the surface; these *appliqué* patterns are said in the patent to be applied by printing.

The defendants applied them by ruling, as distinguished from printing. They either scraped off part of the surface at the instant it was covered by the compound of contrasting color, so as to leave stripes in the notches of the knife, or they ran the india-rubber pigment on through holes in wells or boxes which left the pigment on the surface of the cloth in a thin and narrow stripe. They ruled the lines, instead of impressing them, — a known equivalent.

The deposit of pigment upon a surface in straight lines has for a long time been practised for works on bookkeeping, and the notched knife is like the comb used by painters in imitation of the grain of wood (p. 6).

Sharples says stencilling, printing, painting, marking with the pen, pressing from rollers, pressing from a copper plate, and any other device by which pigment is conveyed from a surface or receptacle to the surface of another body, should be regarded as equivalent to each other for such purposes. They all have grown from simple hand work, and have been adopted as methods of more quickly forming such work or more quickly multiplying copies of it (p. 9, cross-int. 18).

He produces graining tools (int. 21) and a graining roll (int. 22) which show that the comb knife and the graining roller are in the art equivalent for the purpose of forming patterns.

CONSTRUCTION OF ALDRICH PATENT.

The proper construction, therefore, of the Aldrich patent is that it covers a thin rubber cloth fabric coated with a vulcanizable or soluble rubber compound, and ornamented by overlay or *appliqué* patterns of contrasting color, also consisting of vulcanizable or soluble rubber compound. And the defendants, having made such a fabric by the aid of tools well known in the arts as equivalent to printing tools, narrowly considered, in forming patterns of the sort shown on the different fabrics, are to be found to be infringers of the plaintiff's patent.

The question as to the sufficiency of invention necessary to support the patent is one of great delicacy.

It was well stated by Judge SHEPLEY in *Pearl* v. *Ocean Mills*, 2 Ban. & Ard. 476, the change may be such as one inventor would devise with the expenditure of but little thought and labor, and another would fail to accomplish after long and patient effort. When done it may seem so simple as to be obvious almost to an unskilled operative, and yet it may be that it has baffled the mechanical expert for many years.

The way in which the invention is stated may often be misleading. For instance, in the present case, the inventor confined himself to stating that the product was a new product, namely, a rubber cloth printed, that is to say, a rubber cloth of one color forming the groundwork, printed or overlaid with design in a different and contrasting color, which designs were also composed of india-rubber compound analogous to the compound of the groundwork, and both of them cured at the same time after application. This cloth was unanticipated. The cloth cited against it as presenting a figured surface with patterns in contrasting color, did not have the pattern printed in rubber compound and afterwards cured, but the cloth was cured before the compounds were printed, and the compounds were printed in an ink which corroded the rubber. A cloth having its waterproof surface corroded could never be considered the same thing as a cloth having its waterproof uncorroded; nor could a cloth having figures of rubber compound be considered as the same as a cloth having figures of a compound not composed of india-rubber.

Washburn v. *Haish*, 4 Fed. Rep. 908, held that there was invention in adding the spur or barb to a wire for the purpose of fencing. *New York Belting & Packing Co.* v. *Magowan*, 27 Fed. Rep. 363, held that the addition of a rubber backing to a piston packing composed of canvas and rubber was a patentable invention. The celluloid cases and the nickel-plating cases held the improvement in the arts presented by those cases to be a patentable improvement, the fourth claim of the nickel-plating patent being sustained for a compact, coherent, tenacious, and flexible coating of nickel, the proof in the cases being that such a coating of nickel had not, previous to the time of Adams, been made, although the solution that Adams employed and the process that he used was very much in the line of previous work on other metals, but on other metals the solution was required to be in some cases acid, and in some cases alkaline, while with nickel it was required to be neutral to get the best results.

The cases on the Torpedo Well, known as *Roberts* v. *Dickey*, 1 Off. Gaz. 532, 538, sustained the patent for exploding a torpedo in an expended well for the purpose of opening up seams for the oil-bearing stratum.

In 1 Robinson on Patents, sections 119 to 124, and notes, are contained a collection of cases and the deductions drawn from them which govern in this matter, and the learned author says, section 117, "The intrinsic novelty of a concrete invention is evidenced by the novelty of the end accomplished. Novelty of end is evidenced whenever any want is for the first time supplied (sec. 119), or when it is supplied by a new form of satisfaction (sec. 120), and the novelty of form of satisfaction is indicated by comparative utility (sec. 121) or by prior unsuccessful attempts of other inventors (sec. 122).

SUMMARY.

The question, then, before the court is, is this patent to be read as a patent for a new manufacture when it is certain it was a new commercial article, or is it to be read as a patent for printing on rubber cloth? It did not require invention to print on rubber cloth with any kind of ink after rubber cloth had been printed upon with another kind of ink, provided you use the same means. The invention required was to use a vulcanizable ink, and vulcanize it when a non-vulcanized ink had failed.

The invention in this case resided in the fact that the inventor recognized that a good practical commercial result in ornamented cloth could be reached by composing the cloth of three layers, one of cloth, one of india-rubber of a ground color scraped into the cloth and covering it entirely, and a third of sections of india-rubber compound of ornamental pattern dispersed over the surface of the rubber, spread upon the cloth, and applied in contrasting colors and made up of rubber composition, and the whole fabric then vulcanized together.

This was the discovery of a means to satisfy a commercial demand which others had tried to satisfy before and had failed. Aldrich discovered the reason of the failure, and converted failure into success. Having then made an improvement in the arts which no other person had previously made, though others had contemplated that it was desirable, is not his patent in that to be sustained? It seems clear that it should be, and that it has been infringed.

Thos. Wm. Clarke.

149 US 551

149 US 557

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Supreme Court of the United States,

OCTOBER TERM, 1892.

No. 251.

WILBUR F. BRIGHAM,
TRUSTEE APPELLANT,

v.

JUDSON H. COFFIN ET AL.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MASSACHUSETTS.

SUPPLEMENTAL BRIEF FOR COMPLAINANT.

Thos. Wm. Clarke
of Counsel.

BOSTON:
ADDISON C. GETCHELL, PRINTER,
No. 185 FRANKLIN STREET.
1893.

Supreme Court of the United States,

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APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MASSACHUSETTS.

SUPPLEMENTAL BRIEF FOR COMPLAINANT.

[Filed October 21, 1889.]

In this cause, the position of the complainant is perhaps not adequately stated in the brief already filed.

In all the claims of the complainant's patent (pages 37 and 38 of record number) limiting words appear (Claim 1), "*printed* or *stamped* with useful or ornamental designs or figures *in an ink* or *printing compound of different color or shade* from the body of the cloth or fabric, substantially as set forth;" or

(Claim 2), "*printed* or *stamped* with useful or ornamental designs or figures *in an ink* or *printing compound of different color or shade* from the body of the cloth or fabric, *said ink* or *compound* being *composed* in part *of rubber*, *caoutchouc*, *gutta-percha*, *or* some *analogous substance and* a *coloring matter* or materials substantially as specified;" or (Claim 3), the same as Claim 2, with the omission of "coloring material or materials," and the addition of the words "*and containing sulphur or an ingredient for rendering the ink vulcanizable;*" or (Claim 4), the same as Claim 1, with the addition of the words "and varnished;" or (Claim 5), containing the words "*printed or stamped* with useful or ornamental designs or figures *in an ink or printing compound analogous to the coating of the* cloth or body of the *fabric* and *of* a *different color or shade therefrom*, substantially as set forth;" or (Claim 6), the same as Claim 5, with the addition of "*vulcanizable ingredients;*" or (Claim 7), with the addition of "*vulcanizable ingredients* and converted lead;" or (Claim 6), not including lead.

The ink or printing compound is described in the body of the patent on the thirty-sixth page of the Record, "one half of a pound of rubber or caoutchouc, four quarts of naphtha, one half pound of red lead, and one eighth of an ounce of flowers of sulphur; dissolve the gum in the naphtha and then add and thoroughly mix the other ingredients therewith." This is a thin rubber paint. It is provided that other solvent than naphtha may be employed.

In analyzing this invention to find its scope and its novelty, we discover that it involves an employment of the art of printing.

A printed fabric has deposited on its surface a film of material sufficient to change its appearance.

The *printing ink* used *may be* one of two kinds. It may be *a paint* which rests upon the surface, *or a dye* that enters into the surface.

Most of the inks used in printing are paints, analogous to india-ink, which is a carbon color glued on the surface of paper or parchment. Some of them, however, are dyes, analogous to writing ink and absorbed below the surface. If chrome colors are used on parchment they are absorbed and dye it by a tanning process. If india-ink is used on parchment it rests upon the surface. Printer's ink is a paint, on paper: it is a dye on india-rubber.

The Brigham patent described the use of a dyeing ink which destroys the surface.

The Aldrich patent in suit describes the employment of an ink which remains upon the surface, and is not absorbed into it.

The Aldrich result is practical and commercial, the Brigham result is not.

The Aldrich ink is thin, — four quarts of naphtha with one half pound of rubber make the vehicle; one eighth of an ounce, or one sixty-fourth of the quantity of caoutchouc, of sulphur, is added for vulcanization or solarization, and one half of a pound of red lead for body. A pound, therefore, of material to a gallon of naphtha makes the vehicle and coloring matter. This material is deposited in patterns upon the surface, which is an india-rubber surface, as described in the patent, ordinary rubber cloth, *preferably gossamer rubber cloth*, or any fabric composed wholly or in part of rubber, and the four quarts of naphtha being evaporated from the one pound of material leaves a film of colored rubber upon the rubber surface of the cloth.

The novelty of this thing, as described by Aldrich, is that the vehicle of the ink is analogous to the surface on which it is applied, and becomes substantially integral with this surface, as stated on page 37 of the Record, and the patterns adhere to the goods, and the goods are better adapted for use where they are subjected to wear than if printed with an ink or compound containing no rubber or analogous material, because they reinforce instead of destroying the surface.

The important things in the invention are, that the useful or ornamental designs are applied as films by the aid of an ink or compound (vehicle) containing india-rubber or other analogous vulcanizable material, and that the fabric to be printed is preferably gossamer rubber, or, in other words, a fabric covered with rubber applied to the surface and texture of a fabric in solution by scraping it, in a process which gives a filmy rubber surface to the surface. On this fabric, so prepared with a vulcanizable rubber filmy surface, there is applied a discontinuous film of contrasting color, which applied discontinuous film has a vehicle of a nature analogous to the vehicle employed for preparing the ground surface, and which film remains upon the surface.

As it remains upon the surface the film is the film of paint. The vehicle of this paint is a vehicle in all respects analogous to the material of the ground surface of the gossamer rubber cloth.

NO PREVIOUS FABRIC HAD EVER APPEARED IN THE ARTS WHICH HAD THIS CONSTITUTION.

The complainant is therefore entitled, under the claims, for an improved article of manufacture to cover a fabric which is composed of gossamer rubber cloth, that is to say, a cloth which has scraped upon it, by a knife machine, vulcanizable or solarizable rubber in solution as a ground-work, with discontinuous films of dissolved and colored rubber of analogous composition laid on in patterns of contrasting color. This sort of fabric was new in the arts and useful.

This sort of finished fabric is described in Claim 2, with particularity as to the material; and in Claim 3, not only with particularity as to the material, but by the words "analogous substance;" in Claim 5, by the words "analogous to the coating of the cloth;" in Claim 6, by the words "containing rubber or sulphur;" and in Claim 7, "containing rubber, lead, or sulphur;" each of said claims containing the words "printed or stamped with an ink or printing compound," which words would convey the idea of an exceedingly thin film applied as a paint or a dye to the material, if the notion of dye were not excluded from consideration by the description of the vehicle which constitutes the body of the ink.

No paint which has as a vehicle a solution of india-rubber of the character described has been found in the art; therefore the use of thin ornamental films applied in patterns was original with Aldrich, and, being original with Aldrich, was entitled to be patented by him.

When these thin films in ornamental patterns are applied by other means than by blocks or rollers, the result of the Aldrich invention — the fabric ornamented by thin films displayed upon its surface — is reached, and being reached, the patent is infringed.

Goodyear v. *Railroad*, 1 Fish. 626; 2 Wall. Jr. 356.

Hawes v. *Washburn*, 5 Off. Gaz. 491.

Hawes v. *Cooke*, 5 Off. Gaz. 493.

Hawes v. *Gage*, 5 Off. Gaz. 494.

Singer v. *Walmsley*, 1 Fish. 558.

Celluloid Mfg. Company v. *American Xilonite Co.*, 40 Off. Gaz. 1453; 30 Fed. Rep. 437.

Analin v. *Hamilton Mfg. Company*, 13 Off. Gaz. 273; 3 Bann. & Ard. 235.

Woodward v. *Morrison*, 2 Off. Gaz. 120; Holmes, 120; 5 Fish. 357.

Analin v. *Levenstein*, Law Rep. 24 Chancery Div. 126.

Pickard v. *Packard*, 30 Off. Gaz. 179; 23 Blatch. 23; 22 Fed. Rep. 530.

Celluloid Mfg. Co. v. *Chrolithion Collar & Cuff Co.*, 23 Blatch. 205; 23 Fed. Rep. 397; 31 Off. Gaz. 519.

It would be quite impossible to tell the difference between a fabric in which the films were deposited by pen ruling or were deposited by transfer from reliefs or from intaglios; and, indeed, there is no difference. A painted surface is, *qua* surface the same, whether brush-painted, *bat*-printed, transfer-printed, or block- or roll-printed. The picture is applied to the background. The method of manufacture does not inhere in the result. The result is a surface deposit in ornamental designs of a colored pattern caused to adhere by being engaged in a vehicle of material analogous to the material of the groundwork, and practically homogeneous with it.

It is understood that the contention of the defendants is that the method of applying the film is an inherent quality of the result. The complainants contend that the result is the only thing in which there is any inherent quality.

This is the scope of the claims as they read. Why should they be distorted? The dyeing process did not give commercial results: the Aldrich painting process did. The results differed. It required intelligence and trial to ascertain that they would. Let us have the value of our result.

Thos. Wm. Clarke.

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SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1892.

No. 251.

WILBUR F. BRIGHAM, TRUSTEE,
Appellant,

v.

JUDSON H. COFFIN AND L. DEWART APSLEY,
Appellees.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MASSACHUSETTS.

BRIEF FOR APPELLEES.

J. E. MAYNADIER,
of Counsel.

ROCKWELL & CHURCHILL PRESS, BOSTON

Supreme Court of the United States.

OCTOBER TERM, 1892.

WILBUR F. BRIGHAM, TRUSTEE, APPELLANT,

v.

JUDSON H. COFFIN AND L. DEWART APSLEY.

BRIEF FOR APPELLEES.

The main question is as to the proper construction of the Aldrich patent in suit, No. 283,057, pp. 36 to 38.

The Patent Act speaks of an Art, a Machine, a Manufacture, and a Composition of Matter. The appellees contend that the Aldrich patent is for an alleged improvement in the art of making rubber cloths or fabrics, and that it cannot be construed to be for an improved manufacture or article; that is, an improved rubber cloth or fabric.

The appellees prevailed on this issue in the court below, as will be clear from the opinion of the Court, pp. 55 to 56; for although the opinion states that " the claims of the patent are not for an improved mechanism, but for an improved article of manufacture," yet this statement is followed by the seemingly contradictory statement, " which consists *in printing* ornamental figures upon a rubber fabric with a colored ink, composed in part of rubber."

But manifestly an *article* cannot consist " *in printing*," or in any other act. An art may consist in an act, or in doing something, but not so of an article; and this was of course obvious to the court below; so that it follows that those statements in the opinion mean, in substance: The claims of the patent are *in form* for an improved article of manufacture, but in substance for an improvement in the art of making such an article; which improved art consists in printing ornamental figures upon a rubber fabric, with a colored ink, composed in part of rubber. So construed, the claims were held void for lack of invention, and no argument is deemed necessary on that point, as the opinion of the court below is deemed conclusive.

The appellant must contend here, as in the court below, that the Aldrich patent is for an improved article or manufacture, and not for an improved art.

As to this, it is clear that the invention is said in the patent to be "a certain new and and useful improvement in rubber cloths or fabrics," and that the invention "consists in a rubber cloth or fabric, composed wholly or in part of rubber, having one or both of its surfaces provided with useful or ornamental designs or figures, *printed or stamped* thereon with an ink or compound . . . containing rubber, caoutchouc, gutta percha, or some analogous material, *as hereinafter more fully set forth and claimed.*"

All the claims begin with the phrase, "As an improved article of manufacture;" but all the claims contain also the words, "*printed or stamped.*" It is submitted with confidence, that these words, "*printed or stamped,*" are controlling, and that none of the claims cover the article when made otherwise than by printing or stamping; that is that all the claims must be limited to the alleged improved art, and that no one of the claims covers broadly any improved article.

In detail, the first claim is void, because of "Exhibit, Brigham patent," pp. 43, 44. The fourth claim is void for the same reason, as varnishing adds nothing patentable.

All the other claims are limited by the terms "ink or printing compound" of rubber or the like. [That these terms necessarily imply a process or art, has been already argued.]

It was argued in the court below that the implication from the use of the terms "printed or stamped," and "ink or printing compound," was not conclusive; that it was a fact that the Aldrich patent described an article which was in substance rubber cloth, with finishing films of rubber compound (meaning by "films" an extremely thin coating of rubber) such as can be obtained only by using rubber *in solution;* say four quarts of the liquid solvent to about a pound of the solids to be dissolved; the solvent evaporating, and leaving the solids in the form of a film, whose thinness was comparable to the films of printer's ink on printed matter; that that kind of rubber cloth was new with Aldrich, so far as the record tended to show; and that the Aldrich patent should be construed for that kind of rubber cloth, as a new or improved article, whether made in one way or in another. It was contended, that thus construed, the second, third, fifth, sixth, and seventh claims were valid, and covered all rubber cloths, ornamented or finished with such films of rubber compound. In brief, that the main feature of the invention of the Aldrich patent was figures of a thin solution of a *rubber compound*, on a *rubber* surface; a new kind of goods, wholly unlike the kind of goods described in the Brigham patent, for the reason that the inks used in that patent were not the same in kind as the surface on which they were used; and wholly unlike the Dunbar and Lothrop patent (pp. 45 and 46), for the reason that the thin sheets or strips of rubber compound of that patent are radically unlike the films which result from applying rubber compound in solution, and allowing the solvent to evaporate.

Great stress was laid upon the fact that the finishing films of rubber compound of the Aldrich patent were radically unlike printer's inks or compounds when in place, for the reason that the solids left in place by the evaporation of the solvent when a rubber compound in solution was used on a rubber surface were of the same nature as the surface on which they were deposited; and yet were the same in substance as printer's inks or compounds in being mere films upon a ground of different color. In short, it was strenuously urged that Aldrich had made an invention, because he had for the first time achieved these two results; viz.: to deposit a finishing film, which was, first, like the finishing film of the printer, as far as concerns tenuity and contrast to the surface on which it is deposited; but, second, like the finishing strip of the Dunbar and Lothrop patent (pp. 45 and 46), so far as concerns becoming integral with the surface on which it was deposited.

The appellees contend that this ingenious argument does not do away with the force of the words "printed or stamped" and "ink or printing compound." It may be said that appellees are forced to take an extreme position; namely: that of two pieces of rubber cloth, each precisely like the other, one may be under the Aldrich patent and the other not; because in one the finishing film of rubber compound is applied by *printing* or *stamping;* that is, the rubber compound is used as an *ink* or *printing compound*; while in the other the finishing film of rubber compound is not so applied; that is, it is not used as an ink or printing compound. But this is in truth not an extreme position, but the ordinary position where the patent sued on is what is commonly called a "process" patent; *i.e.*, a patent for an improved art, which means nothing more than a certain way of making an article.

It is wholly immaterial in this case whether the article be new or old; the question is, simply, Have the defendants practised the process claimed? Have they made the goods described by that process? For they have full right to make those goods by a different process.

Even if the court below be reversed as to lack of invention, and it be held by this court that the production of a finishing film of rubber compound on a surface of rubber compound, be an invention, in spite of the Dunbar and Lothrop patent, yet the appellees must prevail, because they have not "printed or stamped" rubber cloth with an *ink* or *printing* compound, which was a rubber compound in solution, or a *liquid* rubber compound. The necessary implication from the use of the terms "ink or printing compound" is, in itself, abundant shelter for the defendants.

And more than that, for had the claims read: "The article of manufacture above described, compound of cloth coated with a thin layer of rubber compound, and finished with films of rubber compound, forming figures or the like, *applied* substantially as described," the Aldrich patent must still be limited by the description to goods made by *printing* or *stamping;* for the reason that no other way of applying the finishing films is described.

Possibly, Aldrich might have obtained a patent for his product or article; but no such issue is here raised, and it is immaterial whether he might or might not have had such a patent; for he has obtained a patent solely for his process or art, and the community have full right to make his product or article by any other process or art, even though the patent for the process or art be valid.

I. The Aldrich patent is void, for the reasons given by the court below.

II. The first and fourth claims of the Aldrich patent are void, even if the other claims be held valid.

III. A patent for an art or process is not infringed by making the product by some other art or process.

IV. In a suit under a patent for an art or process, the defendant is not put to proof as to the novelty of article or product, and that is a wholly immaterial question.

V. The terms "printed or stamped," and "ink or printing compound," cannot be eliminated from the claims, nor explained away.

Respectfully submitted,
By J. E. MAYNADIER,
for Appellees.